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Psychological Abstracts

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PSYCHOLOGICAL ABSTRACTS

VOL. I, No. 11

NOVEMBER, 1927

GENERAL

2311. [Anon.] **Report of the National Research Council for the year July 1, 1925-June 30, 1926.**—This report contains a statement concerning the organization and methods of the National Research Council, an announcement of officers for 1926-1927, a list of publications, a report of the treasurer and a statement of finances, a statement concerning research fellowships, and a list of fellowships awarded. A list of the members of the Council is presented.—*R. W. Gilbert* (New York).

2312. **Boring, E. G. Empirical psychology.** *Amer. J. Psychol.*, 1927, 38, 475-477.—The term "empirical" is frequently used as the adjective for "experience" applied to psychology; it means in this sense any method of procedure that appeals to experience and therefore includes experiment as well as haphazard observation. It is not, however, desirable to attempt legislative restriction as to the definition of the word "empirical."—*G. J. Rich* (Institute for Juvenile Research).

2313. **Carnap, R. Eigentliche und uneigentliche Begriffe.** (Literal and figurative concepts.) *Symposion*, 1927, 1, 355-375.—*Literal* concepts are subdivided into *real* and *formal* (logical and arithmetic) concepts. The former constitute the particular objects of science. The latter serve as handmaidens in the presentation of knowledge by *real* concepts. There are also *figurative* concepts which are defined implicitly through an axiom system. These are variable. Applications under *real* concepts are known as "*Realisationen*"; under *formal* concepts as *formal models*. The axiom system may be either *mono-* or *poly-morphic*. If each principle concerning the concept of axiom system is demonstrated as true or false, one calls it *definitely defined*. If it is definitely defined, monomorphic, and reversed, it is termed *complete*. If through an axiom system only *one* figurative concept is introduced, it is called *self dependent*; if along with more, they are termed *dependent*.—*P. R. Farnsworth* (Stanford).

2314. **Ferree, C. E., & Rand, G. An instrument for measuring the breadth of the pupil.** *Amer. J. Psychol.*, 1927, 38, 292-293.—A telescope which is focussed upon the pupil, and which is provided with an illuminated scale, is described.—*G. J. Rich* (Institute for Juvenile Research).

2315. **Gundlach, R. Some difficulties with Weiss's behavioristic postulates.** *Amer. J. Psychol.*, 1927, 38, 469-475.—Weiss's system of psychology based on the postulates of the physical sciences encounters difficulties and inconsistencies. The assumed postulates are inadequate by definition as the basis for psychology. This inadequacy is tacitly admitted, but the appearance of consistency is maintained by the ambiguous use of the terms "stimulus" and "response." The concept of movement is taken arbitrarily and then discarded. The basis for the classification of behavior is sociological, not psychological.—*G. J. Rich* (Institute for Juvenile Research).

2316. **Halverson, H. M. The audio-oscillator.** *Amer. J. Psychol.*, 1927, 38, 294-295.—The audio-oscillator, which consists essentially of an electric tuning fork and two transformers, produces tones which may be sustained indefinitely

without change of intensity and which are practically free from harmonics.—*G. J. Rich* (Institute for Juvenile Research).

2317. **Kull, C., & West, C. J. Doctorates conferred in the sciences by American universities, 1925-1926.** *Repr. & Cir. Ser. Nat. Res. Coun.* (Compiled for the research information service, National Research Council.)—Thesis titles for all doctorates conferred in the sciences by American universities in the years 1925 and 1926 are listed, grouped according to subjects, and arranged in each group, alphabetically according to universities. In tabular form data are presented showing the number of doctorates conferred in the sciences each year from 1917 to 1926, by each of forty-nine American universities. Data are also given showing the total number of doctorates conferred in each subject in the same years, chemistry taking the lead throughout. In nearly every year the number of degrees in chemistry is more than twice as great as in any other subject.—*R. W. Gilbert* (New York).

2318. **Kline, L. W., & Kline, F. L. Psychology by experiment.** Boston: Ginn, 1927. Pp. xii + 339. \$2.00.—The book contains more than a hundred experiments and is designed as both a text and a laboratory manual. The author states that "The present laboratory manual has been planned and arranged with the belief that while students are learning the fundamental laws of the science they should have ample opportunity to observe the continuity in its development. . . . It is based upon many years of experience, in which we have carefully tried out the experiments given. Naturally not all the experiments given here could be used in a circumscribed introductory course, but the number has purposely been made large so that selection may be possible." The experiments are grouped under the following heads: movement; sensations; attitude; attention and selective action; retention and association; perception; learning; memory and imagination; reasoning; affective reactions; feelings and emotions. Each of these groups of experiments is preceded by an introduction and followed by a group of exercises and a bibliography.—*J. R. Liggett* (California, So. Br.).

2319. **Klüver, H. The problem of type in "cultural science psychology."** *J. Phil.*, 1925, 22, 225-234.—The field of the inquiry is limited to "*kulturwissenschaftliche*" as opposed to "*naturwissenschaftliche*" psychology; the concept of Spranger, derived from Dilthey, is that chiefly under consideration. The analysis of act-complexes yields the types discussed, which are the economic, theoretical, social, power, esthetic and religious. These have been reached through a scrutiny of the data of history, and refer to persons who stand in harmonic relations with these particular aspects of the superorganic structure; therefore, it is remarked, Spranger's contribution is to be regarded as primarily appertaining to the philosophy of history rather than to psychology as ordinarily conceived.—*R. R. Willoughby* (Clark).

2320. **Laporte, J. Le coeur et la raison selon Pascal. Part III.** (Heart and intellect according to Pascal.) *Rev. phil.*, 1927, 52, 421-451.—This third and last article on Pascal is essentially of philosophical interest. A further elaboration is made of Pascal's conception of the heart, indicating how it permeates his whole philosophical system.—*T. M. Abel* (Cornell).

2321. **Lewin, K. Gesetz und Experiment in der Psychologie.** (Law and experiment in psychology.) *Symposion*, 1927, 1, 375-421.—A philosophic discussion of the scientific and theoretic roots out of which the more acute psychological problems have developed.—*P. R. Farnsworth* (Stanford).

2322. **Lund, F. H. Psychology, the science of mental activity.** New York: Seiler, 1927. Pp. xx + 488. \$2.50.—This is a text written primarily to meet the interests and the needs of the beginning student of psychology. While the author has attempted to present the best results from all fields, the material is presented in terms of the concept of stimulus-response patterns "because of its

clearness and its general acceptance in modern psychology." The first part of the book treats of the nervous system and the "activities which depend upon native disposition and inherent nervous organization:" reflex action, instinct, emotion, feeling, purposive and voluntary activity, the senses, and attention. The second part deals with the "higher functions and the more strictly mental (i. e., more variable and less overt) activities." In this part Hollingworth's principle of redintegration is emphasized as meeting the deficiencies of the laws of contiguity and exercise and effect, and as accounting in a more satisfactory manner than does any other principle for the nature and operation of mental and physical sequences. The subjects treated in this section are: learning and the acquisition of skill, habit, memory, intelligence ("the modifiability of the nervous system and the general adaptability and resourcefulness which such modifiability effects in the range of the individual's responses"), association, perception, imagery, imagination and dreams, language and meaning, thinking, belief and confidence. In the final chapter the problem of personality (those general characteristics of mental and physical constitution which distinguish one individual from another) is considered with some discussion of types, organization, dissociation and hypnosis. At the end of each chapter is a list of questions and exercises and a brief list of references.—*L. M. Harden* (Clark).

2323. **Marston, W. M.** *The psychonic theory of consciousness.* *J. Abn. & Soc. Psychol.*, 1926, **21**, 161-169.—In line with the recent tendency to make psychology a physical science, and to provide objective and behavioristic explanations, the author puts forth this theory. Difficulties with the physical and behavioristic descriptions of "consciousness" in terms of nervous impulses are discussed. Many conscious phenomena are localized by neurologists, at the synapses of individual neurones, in reflex arc conduction. It is suggested that the totality of changes occurring upon this surface of separation between any two neurones, whenever the junctional membrane is continuously energized, from the emissive pole of one adjacent cell to the receptive pole of the next, intrinsically constitutes consciousness. Objections to an interneuronic theory of consciousness are found not to hold against this theory. Any particular unit of junctional tissue may be called a "psychon" and considered the structural unit of psychology, analogous to the neurone in neurology. The principal function of the psychon is consciousness. It seems a tenable suggestion that relativities of nerve impulses existing upon psychons of the lower nervous levels may themselves become adequate stimuli to the more complicated cortical arcs.—*E. N. Brush* (Boston Psychopathic Hospital).

2324. **McGinnis, J. M.** *Electrical control with the method of constant stimuli.* *Amer. J. Psychol.*, 1927, **38**, 295.—Electrical contacts actuated by a metronome provide a method for the rapid presentation of auditory or other stimuli.—*G. J. Rich* (Institute for Juvenile Research).

2325. **Money-Kyrle, R.** *Belief and representation.* *Symposion*, 1927, **1**, 315-331.—". . . what have been considered rival beliefs are often in reality rival representations of the same belief. . . . one representation not . . . truer but . . . more convenient than the other. . . . the differences between the main conceptions of the world, . . . are at least in part differences of this type, that is . . . they differ more in convenience than in truth." Belief must be distinguished from the mental picture used to represent it. "Just as the external world of common sense is the ideal *extension* of our perceptual field, so are the worlds of speculation ideal *refinements* of the world of common sense." The three main types of such representation are the anthropomorphic, the mechanistic and the mathematical. "What we call the external world is, then, a purely mathematical construction which helps us to summarize the possible combinations of sensation." The external world should not be considered as literally outside consciousness.—*P. R. Farnsworth* (Stanford).

2326. **Morgan, J. J. B., & Gilliland, A. R.** *An introduction to psychology.* New York: Macmillan, 1927. Pp. ix + 319.—This text-book is designed primarily for use in high schools, and the subject-matter has accordingly been clarified and simplified. Much controversial material has been omitted, and some concrete and important questions of special interest in the adolescent years have been stressed. The authors have also "emphasized the importance of control, effort, and the moral personality, in the hope that the study of psychology may be an encouragement to the younger student to allow his ideas to grow along healthy, rational, and optimistic channels." The chapters are carefully outlined and supplied with questions and suitable references for further reading. In addition to the more common topics, there are chapters on effort, sleep and dreams, individual differences, and personality. The treatment is conservative throughout.—*H. Cason* (Rochester).

2327. **Overstreet, H. A.** *A quarter-century of psychology. A science that has only just been born.* *Century*, 1927, 103, 526-535.—This popular article sketches the influence of psychology in shaping a new point of view towards child life, in medicine, industry and social life. The development of the science in Germany, France, Italy, Austria and America is traced with a review of the specific contributions of each country, and those of some of the leading psychologists in the last few decades, with special mention of the contributions from students of abnormal psychology.—*A. L. Allport* (Dartmouth).

2328. **Pillsbury, W. B.** *Gestalt vs. concept as a principle of explanation in psychology.* *J. Abn. & Soc. Psychol.*, 1926, 21, 14-18.—The position of the *Gestalt* psychologists is that the form or the whole with which analysis must begin is a more important factor than the separate factors into which the whole may be analyzed in explaining any given phenomenon. Four different senses may be distinguished in which the term "form" is used, representing four factors whose importance few would deny. The question is whether the form notion is primary, and explains each of the factors, or whether form itself takes on meaning from the characteristics and functions that are ascribed to it. The tendency in science is to reduce all complicated phenomena to the fewest possible types, and of the simplest possible character. These are called concepts. The writer holds that one unanalyzed concrete phenomenon cannot be used as an explanation of its parts, or to understand another concrete phenomenon unless points of identity can be established between them. The real explanation would then lie in the identical elements into which both were analyzed.—*E. N. Brush* (Boston Psychopathic Hospital).

2329. **Ranschburg, P.** [On the psychology, physiology and physics of the normal and pathological phenomena of consciousness.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoj deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 71-80.—Everyday experience has shown that the quantity of mental energy at the disposal of the individual is limited. The author attempts to explain by means of a model of consciousness constructed by him, along with other methods, that the phenomena of the decrease and increase in the distribution of mental energy are actually analogous to a physical energy. In this manner a series of known psychic phenomena are analyzed. In the physiological field these facts correspond to the limitation of the quantity of blood carried to the brain at a given moment of time, and to the amount of oxygen, nutritive material and hormones contained in it. The distribution of the oxygen among the millions of neurones of the cortex, as well as the vegetative centers of the cortex, ensues in three ways: (a) chemical (the local distribution in the region of the smallest blood vessels); (b) physical (the local regulation within the branches of a larger vessel); (c) reflexive (the distribution of the blood among the main branches of a larger vessel).—*A. L. Shnirman* (Leningrad).

2330. **Schlick, M.** *Vom Sinn des Lebens.* (Concerning the sense of living.) *Symposion*, 1927, 1, 331-355.—"If we need a life rule, then let it be this: 'Keep the spirit of youth', for it is the sense of living."—*P. R. Farnsworth* (Stanford).

2331. **Tinker, M. A., Thuma, B. D., & Farnsworth, P. R.** *The rating of psychologists.* *Amer. J. Psychol.*, 1927, 38, 453-455.—A questionnaire was circulated among professional psychologists to ascertain the consensus of opinion concerning the relative importance of persons contributing to the development of psychology. With a few exceptions, the philosophers, to whom many of the present-day historians of psychology devote most of their attention, received average or low ratings.—*G. J. Rich* (Institute for Juvenile Research).

2332. **Tsuchida, K.** *Contemporary thought of Japan and China.* New York: Knopf, 1927. Pp. xi + 240. \$2.50.—After tracing the introduction into Japan of English utilitarian free thought, French social liberalism and German absolutism, and presenting the views of H. Kato and A. Oka as representing the philosophy of the natural scientists, the author considers at greater length the Japanese academic philosophers and social thinkers, who center their discussions around the ideas of Kant and Marx. The philosophies of G. Kuwaki, K. Nishida, H. Tanabe, S. Nishi, M. Kihira, K. Soda, and S. Hatano are recapitulated as samples of Neo-Kantianism and Neo-Hegelianism. O. Tanaka, K. Sugimori, J. Abe, R. Kita and C. Kaneko are philosophers interested in broader criticism of civilization. M. Hasegawa, T. Murobuse and other journalists and essayists are mentioned as representing the non-academic thinkers. Reference is also made to the socialists, anarchists and feminists. Chinese thought is presented under four topics: (1) interpretation of traditional thought, where fuller discussions are given to the extremes of over-estimate and radical denunciation, represented by the views of Kang You Wei and Chen Tu Siu, respectively, than to the more balanced efforts of Liang Chi Yueh (Liang Chi Chao?) and Hu Shih; (2) attitude toward Western civilization, both that of welcome as expressed by Chen Tu Siu and Hu Shih and that of criticism as expressed by Ku Hung Ming and Liang Sou Ming; (3) controversy between the metaphysicians as led by Chang Chun Li (Chang Chun Mai?) and the scientists as led by Tin Wen Kiang; (4) social philosophy, including the "tri-min-ism" of Sun Wen (better known in the West as Sun Yat Sen) and the Marxism of Chen Tu Siu and Li Tai Chao. The author's own views are scatteredly given as criticisms of the other thinkers. The book contains an index, but gives neither bibliography nor foot-note references.—*E. Shen* (China Institute).

2333. [Various.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoj deyatelnosti.* (Collection presented to V. M. Bekhterev on the 40th anniversary of his professorship.) Leningrad: Izdanie Gosudarstvennie Psikhonevrologii Akademii i Gosudarstvennie Refleksologii Institut po Izu-cheniyu Mozga (Press of the State Academy of Psychoneurology and Reflexological Institute for the Study of the Brain), 1926.—(Cited here to give publisher. Included articles will be found under their appropriate headings.)—*R. R. Wiloughby* (Clark).

2334. **Wells, F. L.** *Value psychology and the affective disorders with special reference to regression.* *J. Abn. & Soc. Psychol.*, 1926, 21, 135-148.—The problem of values in psychopathology and psychology is raised in MacCurdy's "Psychology of the emotions," of which this article is, in part, a review. The mental contents of affective and schizophrenic disorders are coming to be regarded as "escape reactions" or *regressions*. The idea of their less adaptive character is in the background and a value judgment is implicit. Value must be considered from two standpoints, as a function of process, and as a function of energy output with which the process is invested. Religion is of great im-

portance, not only as a carrier of value, but as a criterion of it, while in the secular sphere survival value is the most clearly formulated category. The remaining value carriers may be classified as intellectual processes, sexuality, and social tendencies. Whether organic and sensational or "mental," value is a hedonistic concept. A thing has value as it affords satisfaction. The main value types must be brought into hierarchical relation if regression and sublimation are to be workable concepts outside of psychopathology. Regression denotes the surrender of a higher value for a lower, sublimation the winning from a lower value to a higher. Both beg the question of what higher and lower values are. Values can be compared according to pervasiveness, intensity and constancy. The hierarchy varies with the general conditions of life. Genetically organic values are predominant, while others grow out of them. In general the values of elemental behavior patterns are intenser and more pervasive than derived ones. The transfer of value from elemental to intellectualistic processes may be called sublimation, but it is not implicit that the "sublimated" behavior is of greater value. Sublimation and regression can be conceived in terms of survival and energy output. A decreased effectiveness of energy output is generally postulated in regression. A majority ("normal") scheme of values need not be universally accepted, but criteria of regression in psychopathology must be based on values as they are for humanity in the mass. The study of experimental functions in which values inhere is the psychological problem of values.—*E. N. Brush* (Boston Psychopathic Hospital).

SENSATION AND PERCEPTION

2335. **Banister, H.** Auditory theory: a criticism of Professor Boring's hypothesis. *Amer. J. Psychol.*, 1927, 38, 436-440.—A non-resonance theory of audition meets difficulties in explaining Ohm's Law, the refractory period of the auditory nerve fibers, and tonal lacunae. The attribute of "volume" is too indefinite in its status to be used as a basis for a theory of localization. It seems improbable that sounds have such an attribute.—*G. J. Rich* (Institute for Juvenile Research).

2336. **Blair, H. A.** On an integral relation between the slopes of the branches of Porter Graphs. *J. Opt. Soc. Amer.*, 1927, 15, 1-16.—Allen's recent discovery that the Porter effect may yield graphs which have four or five characteristic slopes rather than only two, one for rod vision, the other for cone vision, has led to this theoretical contribution. A relation was found to exist between the slopes of the branches of the Porter Graphs for a number of colors throughout the spectrum such that the slopes of the branches of each graph can be expressed as integral multiples of a common factor. This relation is shown to hold also for analogous measurements both on the organs of taste and on the organs of pressure. The relation is interpreted as indicating that the physiological effect measured by the critical frequency for any particular color is made up of equal elements which start off in groups from different intensity thresholds. The possibility that these elements denote the action of single end organs or associated groups of end organs is discussed in the light of the measurements made by Adrian and Zotterman on the frequency of the nerve impulses due to the stimulation of single end organs. The interpretation is conformable to the "all or none" law, and it supplies a simple way of explaining deviations from Fechner's law.—*D. B. Judd* (Bureau of Standards).

2337. **Burnett, N. C., & Dallenbach, K. M.** The experience of heat. *Amer. J. Psychol.*, 1927, 38, 418-431.—Stimuli, which singly are adequate only to cold and warm and inadequate to ache, pain and paradoxical cold, arouse, when combined, the experience of heat. Heat is physiologically a fusion of excitations

that are normal to cold and warm, and psychologically a simple quality that lies on the pressure-prick-pain continuum. Its intensity seems to depend upon the stimulus-differential. Heat may appear in a pattern with warm and cold, and is usually preceded by the experience of cold.—*G. J. Rich* (Institute for Juvenile Research).

2338. **Dickinson, C. A.** *The course of experience.* *Amer. J. Psychol.*, 1927, 38, 266-279.—The initial moment of visual experience is a filmy, unlocalized, semi-transparent grey, which first becomes localized tridimensionally and later bidimensionally. Meaning is a progressive overlay of experience, whose climax is logical meaning. The accrual of contour is an important factor in raising this overlay of experience to logical meaning. In the progression to logical meaning grey precedes color, and in the regression from logical meaning color recedes to grey. There is no discrete break in experience in the transition from naming one item in a stimulus-field to the naming of another. The course of experience is a gradual rise to a climax and then a gradual decay. The order of decay is the converse of the order of development.—*G. J. Rich* (Institute for Juvenile Research).

2339. **Doniselli, C.** *Udito e sensi generali.* (Hearing and the general senses.) Milano: Istituto editoriale scientifico, 1927. Pp. 386.—After passing in review the classical discoveries of Flourens and Elia de Cyon on the functions of the semi-circular canals, Cyon's theory of the labyrinth as organ of the geometric sense for motor orientation in space, as well as the resonance theories of Cotugno and Helmholtz, and Ewald's hypothesis of acoustic images evolved by analogy with the retinal image hypothesis, the author summarizes his own investigations, started in 1909, into the functions of the cochlea as organ of the arithmetical musical sense for orientation in time and for counting, and its relation to the geometric sense as well as to the oculo-motor apparatus. His work is the first attempt to prove that the ear is a mathematical organ. To him the spiral shape of the cochlea is not a mere result of Nature's economizing of space, but has just as deep a significance as the tri-dimensional system of the semi-circular canals. The cochlear spiral is a Cartesian logarithmic spiral. The cochlea, functioning on the principle of the logarithmic spiral, is the organ that analyzes sounds and perceives harmony. The Weber-Fechner law is but a particular case of this general musical law. Through its cerebral dependencies, the energimetric brain centers, the cochlea regulates the vocal function and the eye movements. The cochlea, together with its cerebral dependencies, constitutes the organ which reduces to a unitary task the understanding, recognition, learning and reproduction of a melody in all possible tonalities. With regard to eye movements, the author holds that they depend not only on the vestibular apparatus and its cerebral dependencies, the energitropic brain centers, for their direction, but also on the cochlear organ and its cerebral dependencies, the energimetric brain centers, for the tensions of the ocular muscles; as is proved anatomically by the connections between the optic and cochlear nerves, and physiologically by lesions in the auditory field being followed by lesions in the visual field.—*R. E. Schwarz* (George Washington University).

2340. **Goldstein, K., & Rosenthal-Veit, O.** *Über akustische Lokalisation und deren Beeinflussbarkeit durch andere Sinnesreize.* (The influence of the other senses on sound localization.) *Psychol. Forsch.*, 1926, 8, 318-335.—Sounds are best localized by those who have no visual imagery, or who repress their visual imagery. The best cue for localization is a "pure acoustic-motor process"—an immediate motor adjustment of the organism toward the stimulus. If the eyes are turned to the left just as the stimulus is sounded a localization error to the right is made. This sort of error is similar to that made by pathological subjects suffering from oculo-motor disturbance.—*W. S. Hulin* (Princeton).

2341. **Gottschaldt, K.** *Über den Einfluss der Erfahrung auf die Wahr-*

nehmung von Figuren. (The influence of experience upon the perception of figures.) *Psychol. Forsch.*, 1926, 8, 261-317.—Concerning the influence of past experience and habituation upon subsequent form-perception an investigation is made upon the following question: Does one immediately see a complex figure as a whole, or do the familiar parts of it stand out first? A simple figure is exposed from 3 to 500 times and then a complex figure which involves the simple one in its pattern is shown. With no instructions to look for the simple figure in the complex one the simple figure immediately "springs out" in less than 2% of the cases, and even with instructions to look for the simple figure it "springs out" in only 2% of the cases. Also, when a continued search for the simple figure is made it is found in only 19% of the cases. Thus the total figure asserts itself and effectively obliterates the identity of the parts, and past experience is of little consequence. The relative strength of parts and wholes varies between figures and varies for different observers. The simple figures are graded into 5 degrees of strength according to their persistence in the complex figures. These grades are graphically illustrated, but no generalizations concerning the configurational determinants of the strength of identity can be given.—W. S. Hulin (Princeton).

2342. **Hahn, H., Boshamer, K., & Goldscheider, I.** *Die Reize und die Reizbedingungen des Temperatursinnes. II. Die Reizbedingungen des Temperatursinnes.* (The stimuli and the stimulus conditions of the temperature sense. II. The stimulus conditions of the temperature sense.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 36-71.—The general validity of the law of the constant sum of adaptation temperature and Weber's stimulus temperature was demonstrated for regenerating temperature nerves. The receptors of the temperature nerves lie very near the surface of the skin (.07 mm.). The sense has in general no connection with the blood temperature. The presence of a temperature sense in cold-blooded animals (frogs) was demonstrated.—L. T. Spencer (Yale).

2343. **Katona, G.** *Eine kleine Anschauungsaufgabe.* (A little demonstrational puzzle.) *Psychol. Forsch.*, 1927, 9, 159-162.—Two identical pentahedrons may be placed together so as to form a tetrahedron. Only 5 observers in 50 solved this problem within 3 minutes. The difficulty in solution arises from a sort of Müller-Lyer illusion induced by the triangular sides upon the square base of each pentahedron. Also, a conflict with one's "inclination for symmetry" and a difficulty in treating the identical figures as dissimilar occur.—W. S. Hulin (Princeton).

2344. **Lapinsky, M. N.** [On the problem of the mechanism of pain radiation.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 331-383.—A pain appearing in the periphery under special conditions passes as an alarm symptom for a visceral process which subsides without attention, and which can be determined by appealing to the metameric law and with the aid of a more accurate localization of the vaso-motor centers and of the centripetal visceral nerves stimulating them. In most cases of irradiating pain the peripheral vessels take part in the mechanism of the pain radiation. Through their constriction and dilation they possibly contribute to some change in the molecular condition of the peripheral nervous system, in its irritability and conductivity. The reactions which take place in this process rise in consciousness as a pain sensation. The mechanisms underlying the radiation of pain in such cases are based upon processes which inhibit or facilitate the passage of excitation in the vessel centers, and which are produced by the increasing waves of stimulation from a visceral disease center to the spinal cord.—A. L. Shnirman (Leningrad).

2345. **von Uexküll, J., & Boesen, H.** *Der Wirkraum.* (Active space.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 72-87.—Besides a visual space and a tactual space, which are sense spaces, there is an "active" space within which our

movements occur. As entities there are directional signs, which also appear as sense signs. It is claimed that both sets of signs are identical. The shortest distance in this active directional space is about 2 cm. in each direction, when measured by free arm movement. The amount of this distance is conditioned by the resistance of the antagonists. Active space is made up of a tridimensional network of entities or places (*Stellen*) which are held in a sensible coordination system extending from left to right, forward and backward, etc., independent of the position of the head and fixed for the individual. Nystagmus is due to the necessity for agreement of the coordinates of visual space and active space. It is argued that the movement-signs are not to be identified with muscle sensations, but are of central origin.—*L. T. Spencer* (Yale).

2346. **Wever, E. G.** Figure and ground in the visual perception of form. *Amer. J. Psychol.*, 1927, **38**, 194–226.—Various stages in the development of the visual perception of form were produced experimentally by variation of the time of exposure of simple, equivocal stimuli. As the time of presentation increases from very brief exposures, the experience changes in the direction of definiteness and complexity. The figure-ground experience of the very simplest sort shows a degree of heterogeneity of the visual field in which two regions are discriminated, a brightness difference between these regions, a liminal value to the contour separating the fields, and such an areal distribution of the visual qualities that one field, the figure, has a simple, perceived shape. With increased exposure-time, the contour becomes more definite and the transition from one field to the other more abrupt. Still later, definite localization is present. The various features distinguishing the figure from the ground become more definite as the exposure is lengthened. No compulsory conditions were found for a "perfect" experience of figure and ground.—*G. J. Rich* (Institute for Juvenile Research).

2347. **Wilkinson, G.** Is the question of analysis of sound in the cochlea or by "central analysis" in the brain still an open one? *Amer. J. Psychol.*, 1927, **38**, 257–265.—Adrian has demonstrated that a constant stimulus applied through the receptor organs to a sensory nerve gives rise to a rhythmic discharge of afferent impulses, and that the frequency of the rhythm varies with the intensity of the stimulus. If frequency of nerve impulse is correlated with intensity of auditory sensation, it cannot also be correlated with pitch. This concept disposes once and for all of theories of central analysis and makes theories of analysis in the cochlea consistent with the "all or nothing" doctrine of nerve impulses. The resonance theory is supported by the detailed anatomy of the basilar membrane, the effects of prolonged overstimulation upon the cells of Corti, and the localization of the effects of fatigue due to stimulation of the ear by pure tones.—*G. J. Rich* (Institute for Juvenile Research).

2348. **Ziehen, T.** Einige Bemerkungen über das sogenannte Punktschwanken. (Some remarks on the so-called point-instability.) *Zsch. f. Sinnesphysiol.*, 1927, **58**, 59–72.—The instability of the position of a single bright point in the dark room has been described by A. von Humboldt, Aubert, Exner and others. The result of previous investigations seems to be that the phenomenon cannot be satisfactorily explained by involuntary eye-movements. Ziehen in checking and modifying some previous experiments concludes that at least extensive involuntary eye-movements are not responsible for the appearance of the phenomenon. His experiments on two cases with homonymous hemianopsia and on one case with paralysis of the rectus superior pointed to the same result. In experiments with luminous lines and figures pronounced excursions could be observed. Voluntary eye- and head-movements did not banish the phenomenon. The rôle of various factors was studied: convergence, accommodation, horizontal nystagmus, intensity of the stimulus light, and memory-images. Downward movements were relatively infrequent.—*H. Klüver* (Columbia).

[See also abstracts 2314, 2316, 2324, 2368, 2469.]

FEELING AND EMOTION

2349. Kollarits, J. [On objective determination of feeling in normal and abnormal minds.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 87-94.—Those feelings which arise from stimulation are objectively determined. Depression and euphoria are found in cases where they do not arise generally from stimulation but are phenomena accompanying the internal condition of the nervous system and its turgor, or the vital turgor of the entire organism. Only the most extreme of these belong to the realm of hereditary anomalies, while the mild cases find their place in the normal variability of the character.—A. L. Shnirman (Leningrad).

2350. Pradines, M. *L'hétérogénéité fonctionnelle du plaisir et de la douleur. II.* (Functional heterogeneity of pleasure and pain.) *Rev. phil.*, 1927, 52, 395-420.—In a previous article the author postulated that pleasure belongs to organic life while pain belongs to sensorial. Here he discusses the possibilities of pleasure being sensorial as well, that is, of its coming to us without our collaboration as do pains. He finds no such contingency. Reality is a biological phenomenon; it attaches itself to our fundamental needs, and an explanation of its manifestation can never be found in an isolated individual. Pain, on the other hand, is essentially physiological, representing a local condition, and can be explained on the basis of modifications in local nerve endings.—T. M. Abel (Cornell).

2351. Stratton, G. M. *Emotion and the incidence of disease.* *J. Abn. & Soc. Psychol.*, 1926, 21, 19-23.—This is a preliminary report of an investigation concerning the relation of emotion to the individual history of normal persons in regard to disease. Only the emotions of anger and fear have been studied thus far. The data are, as yet, of low consistency. The main relation revealed is that individuals who have had disease show a somewhat more intense emotional reaction than those who have not. Hypotheses are suggested to explain this relation.—E. N. Brush (Boston Psychopathic Hospital).

2352. Symmes, E. F. *Aesthetic preferences by comparison with standards.* *Amer. J. Psychol.*, 1927, 38, 432-435.—An attempt was made to measure affective sensitivity by means of the time required to sort a series of cards into those liked better or worse than a given standard. On account of the variability of the results, no conclusions are drawn.—G. J. Rich (Institute for Juvenile Research).

2353. Tjaden, J. C. *Emotional reactions of delinquent boys of superior intelligence compared with those of college students.* *J. Abn. & Soc. Psychol.*, 1926, 21, 192-202.—With the notion that character tests might offer a means of getting emotional reactions useful in the detection of potential delinquency in groups of normal and superior intelligence, the Pressey X-O Tests were used on delinquent boys, inmates of the Iowa State Training School. The results were compared with those obtained by Pressey on a group of college students, comparable in intelligence. The emotional reactions of the two groups were strikingly similar. The tests are shown to have little or no value in detecting potential criminality, but certain differences in the reactions of the two groups reflect differences in emotional experiences in an interesting manner. Test III appeared to function as an intelligence test with this group. It also serves very well as an ethical discrimination test. The possibilities of using the Pressey tests in exploration of the individual's mental life and in giving clues as to affective make-up are emphasized.—E. N. Brush (Boston Psychopathic Hospital).

2354. Washburn, M. F., Kepler, H., McBroom, N., Pritchord, W., & Reimer, I. *The Moore tests of radical and conservative temperaments.* *Amer. J. Psychol.*, 1927, 38, 449-452.—Tests upon college women classified as radical or conservative by the Moore questionnaire do not show the differences in mirror-draw-

ing, reaction-time, card-sorting or free association found by Moore in the case of college men.—*G. J. Rich* (Institute for Juvenile Research).

2355. **Young, P. T.** *Studies in affective psychology.* *Amer. J. Psychol.*, 1927, 38, 157-193.—A series of experiments upon pleasantness and unpleasantness shows considerable variability in the reports of different observers. The experiments were concerned with the localization of feeling, the nature of the affective processes, and their relations to organic sensations. The reports vary with the subjects' understanding of certain critical words in the instructions, their attitude towards the experiment, their training and their psychological education or indoctrination. Introspective reports of the affective processes are always relative to some logical system in which the observer is trained. Incompatible results are therefore readily obtained from the same experimental setting. The study of the basic affective reactions which are relatively independent of training offers a way out of the difficulty.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 2365, 2405.]

ATTENTION, MEMORY AND THOUGHT

2356. **Bekhterev, V. M.** [Concentration as a dominant process and its rôle in the progress of associative-reflexor activity.] *Voprosy izucheniya i vospitaniya lichnosti* (Problems in the study and education of personality), 1927, No. 1-2, 3-18.—Externally determined, the process of concentration corresponds to the adaptation of the receptor organ, in the sense of producing those conditions which make possible the most effective influence of the external stimulation (of the object), and simultaneously inhibiting all other movements which seems to be equivalent to the removal of certain muscular activities. It is thus a case of a maximal tension of the neuropsychic process in the active center with a suppression of all other centers and a passive condition in other receptor organs. The primary concentration process seems to be congenital, since the act of sucking is a genuine act of concentration or a dominant process. Internal concentration (concentration on unreleased associative reflexes or subreflexes) is characterized by movements, which where possible remove the external stimuli of the corresponding external organ, and also by inhibition especially of all other movements. Concentration as a dominant process lies at the basis of reproductive activity, of logical thought and, so much the more, of creative activity, in that it draws to the center of stimulation not only the impulse, which appears as a result of the external influence, but also the traces of earlier influence. The lack of concentration in pedagogically retarded children and in exhausted persons can be compensated for with the aid of associative-reflexive therapy.—*A. L. Shnirman* (Leningrad).

2357. **Bills, A. G.** *The influence of muscular tension on the efficiency of mental work.* *Amer. J. Psychol.*, 1927, 38, 227-251.—Since intense mental activity appears to be accompanied by increased muscular tension, this study was undertaken to determine whether muscular tension, of and by itself, has any effect upon the efficiency of mental work. The experimental results show that the tension exerted in grasping a dynamometer does increase the efficiency of such tasks as learning and recall of nonsense syllables and paired associates, adding columns of digits, and perception of letters. This increase in efficiency is enhanced with practice and with fatigue where speed is the criterion, but remains constant when other criteria are used. Theoretical explanations of these facts may consider the influence to be exerted either through nutritive channels or through neural channels.—*G. J. Rich* (Institute for Juvenile Research).

2358. **Calkins, M. W.** *Self-awareness and meaning.* *Amer. J. Psychol.*,

1927, 38, 441-448.—“In brief, Miss Amen’s account of her *Os*’ self-experience as essentially meaning is unsatisfactory first, because it is insufficiently borne out by their direct introspections; second, because she never clearly tells us what she means by meaning; third, because many of the senses of the hydra-headed word meaning can not possibly serve as clues to the self-experience; and, finally, because the word meaning often is used in such a way as clearly to imply the very sort of self-experience which Miss Amen denies.”—*G. J. Rich* (Institute for Juvenile Research).

2359. **Chen, H. C.** Capacity to learn of an aged person. *Chinese J. Psychol.*, 1923, 2, No. 1, 11.—The author of this article tested the learning ability of his mother by the Peterson Rational Learning Test and mirror drawing. Two of his nephews also took part. Although his mother is capable of rational learning, her ability for doing so is far less than that of his two nephews; but her memory ability exceeds that of the two nephews greatly (after one year she still remembers the eight characters denoting family relationships, with their correct arbitrarily assigned numerals, while the two nephews forget several of the numerals). The mirror drawing test was made in the afternoon and lasted about four months, without the omission of a single day. Eleven trials were made each day, ten for the right hand and one for the left. The following conclusions were drawn from the learning curves: (1) the learning is hard at first but there is much progress; (2) in the middle of the course, there is not much progress, this period being from the 31st to the 57th day; (3) the plateau comes between the 57th and the 100th day, in which period not only is there no progress but sometimes retardation is seen; (4) there is a second plateau from the 100th to 129th day, although not as high as the first; (5) the time curve for the left hand is similar to that of the right; (6) the mother’s learning process is primarily the same as that of the young people; (7) the learning curves for the nephews are similar to that of the mother, but progress comes faster; (8) as the experiment was made on only one person, the conclusions cannot apply to every aged person, and neither can it be asserted that every aged person learns at the same rate as the young.—*S. K. Chou* (Stanford).

2360. **Dallenbach, K. M.** Dr. Fernberger on the “range of attention” experiment. *Amer. J. Psychol.*, 1927, 38, 479-481.—The number of elements which are actually seen is of no interest in experiments upon the range of attention. What must be determined is rather the number which may be exposed without appearing at two different levels of clearness. Only in this way may the cognitive factors be eliminated.—*G. J. Rich* (Institute for Juvenile Research).

2361. **Essertier, D.** *Les formes inférieures de l’explication.* (The inferior forms of explanation.) Paris: Alcan, 1927. Pp. 356.—Animals comprehend a succession of phenomena in their environment; man connects these with one another: he explains. The author seeks to explain how this mental act, which freed man from animality, came about for the first time in the mind of man: what form of explanation preceded the scientific. Explanation is a response to a difficulty of a particular nature—which is the problem. It is the assignment of an imaginary cause to an unknown phenomenon. In primitive times everything was given but one explanation: mystic causality. Later came a number of myths which are still in vogue in some of the lower forms of society which exist today. It fell to unusual personalities, who possessed self-mastery, to create true thought and positive science. But the primitive consciousness persists in our existing stage of development; it is that which “thinks” in us when neither the desire for truth nor the thought of duty can guide us. It is this conception of the survival of the primitive attitude in us which permits us to understand that which we must learn by collective thought; this is rendered possible by the tendency of human consciousnesses to place themselves immediately in a unity because they com-

municate with each other in their original state; and that is the reason why collective thought has never arrived at truth or at science. One cannot get at the consciousness of a savage merely by making certain subtractions from the reflective and civilized consciousness; indeed there is rather a primitive consciousness in which both the savage and the civilized participate and which is the original and permanent foundation of human nature, the action of which determines, retards, or disturbs social evolution. The chapter headings will give an idea of the numerous problems which the author undertakes to treat: (1) The development of thought; technique and science; the early forms of explanation. (2) Origin and explanation (the primitive consciousness; the dread of doubt and the elimination of problems; the original place of emotions and imagination; the imaginary and the real; curiosity; the introduction of causes). (3) Mystic causality. (4) The pseudo-sciences (magic; magic "drama" and magic "discipline"; magic legality; "Magia Naturaliste;" the physics of occult power; the idea of "experimentum"; alchemy). (5) Primitive logic (confusion and distinction; morbid logic; indifference to contradiction; the logic of "totemism"). (6) Collective thought. (7) Explanation and personality (the individualization of desire; the birth of doubt). (8) The restoration of explanation (the "conversion" of the human mind; Egyptian science; Greek thought; the Cartesian revolution). No bibliography.—*Math. H. Piéron* (Sorbonne).

2362. **Fernberger, S. W.** The "range of attention" experiments. *Amer. J. Psychol.*, 1927, 38, 478-479.—In experiments upon the "range of attention" one is interested in the number of elements which are seen at a single level of clearness. If a report of this number is not made, the experimenter has no proof that the subject saw as many as were presented.—*G. J. Rich* (Institute for Juvenile Research).

2363. **Jenkins, J. G., & Dallenbach, K. M.** The effect of serial position upon recall. *Amer. J. Psychol.*, 1927, 38, 285-291.—The data obtained in the writers' earlier study of forgetting shows disagreement between the two observers in the relative recall of the first and last syllables in each series. There is, however, a definite correlation between the position of a syllable and the order in which it is recalled. It would seem that the effect of primacy, where evident, is due to an "initial set" towards the first syllable, i.e., a tendency to report the first syllable first.—*G. J. Rich* (Institute for Juvenile Research).

2364. **Koffka, K.** Diskussion. *Bemerkungen zur Denk-Psychologie*. (Remarks on thought-psychology.) *Psychol. Forsch.*, 1927, 9, 163-183.—Koffka denies the accusation that his theory of mental development is borrowed from O. Selz's theory of mental operations. Selz is associationistic, his doctrine is essentially like the Würzburg School's, his method of experiment is the same as that used by Watt and Messer. Selz's doctrine of "reflexoidal coordinations" is a sort of inner mechanics, and is obviously unlike Koffka's doctrine that the total phenomenal situation is a part of the thinking process.—*W. S. Hulin* (Princeton).

2365. **Lewin, K.** Untersuchungen zur Handlungs- und Affektpsychologie. III. **Zeigarnik, B.** Das Behalten erledigter und unerledigter Handlungen. (Investigations on the psychology of action and affection. III. The memory of completed and uncompleted actions.) *Psychol. Forsch.*, 1927, 9, 1-85.—In a series of 43 tasks, such as sketching, printing names, assembling puzzles, etc., some tasks are interrupted before their completion and other tasks are fully completed. In recalling several mixed series of these completed and uncompleted tasks the uncompleted ones are remembered 90% better than the completed tasks. An affective tone of tension—a "quasi-need"—follows upon the interruption of a task and the persistence of this unresolved tension prolongs the memory of the task. Univocality of attitude and eagerness toward a task enhance the feeling of need.

Children recall the interrupted tasks almost exclusively.—W. S. Hulin (Princeton).

2366. Whitely, P. L., & McGeogh, J. A. The effect of one form of report upon another. *Amer. J. Psychol.*, 1927, 38, 280-284.—The interpolation of an interrogatory form of report following a narrative report upon the Binet Object-Card (immediate recall) has a facilitating effect upon subsequent recall at 30, 60, 90 and 120 day intervals. The effect is more accentuated at 90 and 120 days than at 30 and 60 days. Narrative report interpolated prior to interrogatory recall, however, does not facilitate recall or report measured in terms of answers to a series of questions.—G. J. Rich (Institute for Juvenile Research).

[See also abstracts 2343, 2501.]

NERVOUS SYSTEM

2367. Beritov, I. S. [The law of correlative radiation of stimulation as the fundamental law of the activity of the central nervous system.] *Novoe v refleksologii i fiziologii nervoi sistemy* (Reflexological and neurophysiological news), 1926, 2, 31-47.—Based on the study of the individually acquired reflexes, the author has established this new law for the radiation of stimulation in the cortex of the cerebral hemisphere: The stimulation radiates from each center through the entire cortex of the cerebrum; but the intensity of stimulation in each definite nerve course starts from the center; that is, the radiation of stimulation is the more intense—on the most excitable course—the higher its own excitability and the lower the excitability of all other courses starting from the same center. This law of radiation of stimulation the author calls the law of correlative radiation of stimulation. The correlative radiation of stimulation depends apparently on the fact that each time—even before the radiation of stimulation—an electric action current is spread through the nervous system, which is produced during the stimulation. Under the influence of this current in the intermediary layers, at the point of transition of one neuron into another, the monovalent K and Na ions move toward the cells. The accumulation of these ions on the cell membrane causes a loosening of the latter, which makes it more penetrable for the ions. The action current, of course, causes a more marked movement of the ions and a greater loosening of the cell membrane in a nerve course with little resistance than in the courses with high resistance. Therefore, during the stimulation which radiates after the action current, more exciting ions pass from the nerve ending of one neuron into the cell of another in the nerve course with little resistance than in the other courses with great resistance. It is due to this fact that the radiation of the stimulation in the complex ramification of the neuron follows the electric current in a system of conductors of varying resistance.—A. L. Shnirman (Leningrad).

2368. Dieter, W. Über die sympathetische Innervation des Auges. (On the sympathetic innervation of the eye.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 293-296.—In man, as in the dog, cat, and rabbit, the oculo-pupillary fibres of the sympathicus go through the middle ear via the promontory.—L. T. Spencer (Yale).

2369. Heymanovich, A. I., & Nemlikher, L. I. [On the topographic-partial sensibility defects in spinal processes.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 383-392.—The authors take as a subject for their consideration the atypical disturbances of sensation which have previously lacked a neurological explanation which was not open to some objection. There are cases in which one metamere or a series of zones corresponding to metameres are only partly affected by the anaesthesia (partial anaesthesia in the topographic

sense). Such anaesthesias have often been described in the literature. On the basis of 3 of their own observations which fit only imperfectly into the Vierheller scheme, the authors then attempt to explain the partial sensory disturbances by referring them to a partial affection of the posterior roots of the spinal cord themselves. For this explanation they adopt an ordered arrangement of the fibers which is analogous to the Stoffel principle for the peripheral nerves. As a striking example of the radicular origin of atypical partial anaesthesias the authors cite the so-called lampasic anaesthesia of radicular ischias (root neuritis of the sciatic nerve) described by Prof. Dobrokhotov. Many reflections appear to support the acceptance of an arrangement of the fibers similar to the Stoffel principle in the posterior roots before their entrance into the spinal cord and their division according to the qualitative functions (sensations of pain, temperature, etc.). The Stoffel arrangement of the fibers must be most pronounced in the dorsal roots. This would correspond biologically to anatomic facts shown by S. J. Heymanovich, that the Stoffel principle in the peripheral nerves is more marked the more simple the function, and vice versa.—A. L. Shnirman (Leningrad).

2370. Howe, H. S., & McKinley, E. Cerebral circulation. *Arch. Neur. & Psychiat.*, 1927, 18, 81-86.—Microscopic study of the capillaries in most tissues offers many difficulties, one of which is the lack of contrast, the vessels being of a color similar to that of their surroundings. It seemed that the brain would be the best place to study the capillaries, as here the contrast would be greatest and observation more accurate and reliable. The work is being carried out along the following lines: (1) determination, by direct microscopic observation, whether the cerebral vessels are affected by stimuli which cause vasomotor effects in vessels of other portions of the body; (2) investigation of the effects of drugs on the vascular system of the brain; (3) study of the causes and effects of thrombosis and embolism; (4) observation of the phenomenon of inflammation, and the evaluation of the effect of treatment directed to its alleviation. The entire field is not discussed in the present report, but a short outline of the methods used is made, and results of some of the experimental studies given.—I. Rappoport (Boston Psychopathic Hospital).

2371. Istomin, P. P. [Achard's new method for staining the medullary sheath and its pathology.] *Sbornik, posvyashennyy V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 223-226.—The new method requires for its employment only a few minutes: the Müller solution is not required; the hematoxylin solution, however, is prepared at the time. The sections can also be stained by means of other methods. The modification which is offered by the author is that the ferrum aluminatum is replaced by a 4% solution of ferri sulfurici oxydati ammoniati with the addition of a 4% solution of alumen. Solution ferri sesquichlorati can also be used with it. The microscopic picture remains the same; the individuality of the structure retains its sharpness.—A. L. Shnirman (Leningrad).

2372. Larionov, V. E. [Actual knowledge of the vegetative nervous system and its pathology.] *Sbornik, posvyashennyy V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 291-316.—Phylogenetically and ontogenetically the nervous system has evolved from inferior formations to superior formations; science, however, has followed another path—it has studied in great detail the functions of the higher centers and has neglected the nervous system of the organo-vegetative life, which is found to be intimately connected with the affective life. An equally abnormal trend in psychoneurology leads to a diversity of scientific opinions, to inexact classification of disorders, and to other irregularities. Rapid specialization also makes it impossible to penetrate deeply into the elementary truths of phylogene-

sis. The study of the anatomy, physiology and pathology of the subcortical system has been prosecuted only during the last ten years. The scientific researches on the functions of the glands of internal secretion as well as the observation of epidemic encephalitis has led to the discovery of the complicated vegetative systems which regulate the organo-vegetative life. The author explains the essential results obtained by researches in the study of the autonomic system and notes the necessity of being more prudent and more systematic in the analysis of the facts obtained. Hasty conclusions lead to the denial of the important physiological truths already established, such as the antagonism between the vagus and the sympathetic and others. In regard to pathology, he demonstrates, from the point of view of modern discoveries, the mechanism of spasmophilia, the phenomena of spasmophilic irradiation of pain, the mechanism of the spasmodic contractions of the sphincters, the origin of symptomatic nasal hemorrhages, the spasmodic innervations of the dorsal spine, etc. Finally he analyzes briefly the most common neuroses, such as neurasthenia, hysteria ("neuroses of exclusion" of Prof. Seppe), schizophrenia, manic-depressive psychosis and traumatic neurosis.—A. L. Shnirman (Leningrad).

2373. Marburg, O. [On the problem of the significance of the layer formation in the gray matter of the cortex.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 195-200.—On the basis of investigations made on the pathology of the cortex in psychoses and in malformations (namely in congenital hydrocephaly) the author believes that one can attempt a division of the layers of the cortex, and that 3 outer and 3 inner layers can be distinguished (if the Brodmann type is accepted). The inner layers are first of all to serve the projection system, and in such a way that the IY layer obviously has a receptor function, and the Y and YI layers an effector. The outer layers, which in a similar manner are divided into receptor and effector parts, are to serve associative functions predominantly. However, it must not be forgotten in this connection that different layers have developed in the beginning by a process of pushing into one another, and what we look upon anatomically as boundaries of the layers are perhaps nothing of the kind.—A. L. Shnirman (Leningrad).

2374. Polyak, S. [On the most recent investigations of the 8th nerve system in mammals.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 27-36.—In the continuation of the studies of the 8th nerve system in mammals new and important facts have been established, which promise to give a new morphological support to those theories of hearing which delay the analysis of the sound in the peripheral receptor mechanism of the 8th nerve system—particularly the theory of Helmholtz. It appears that a perceptible gross discrimination takes place at the ganglia cells which compose the spiral ganglion so called. The same discrimination takes place in the basal coils of the cochlea, only in a somewhat more pronounced manner. Toward the apex the discrimination decreases gradually. In the attempt to establish the connection between certain sections of the spiral ganglion and certain parts of the primary center for hearing, it seems from the results that those bundles of fibers of the cochlear branch which take their origin from the spiral cells of the basal coil of the cochlea extend to the dorsal coil or gyrus of the ventral cochlear ganglion (nucleus cochlearis ventralis). On the other hand, those bundles of fibers which arise from the apical section of the spiral ganglion end in the ventral small gyrus of the primary center. There is, therefore, within the first neuron system of the cochlear branch of the 8th nerve a distinct separation of the fiber elements, which assures an isolated transmission of the peripheral excitation and makes possible a "projection of the cochlea" to the primary bulbar hearing centers. The qualitatively

different auditory stimulations received and isolated by the peripheral organ and the primary centers are probably transmitted within the brain stem to the cerebral cortex unmixed. Therefore, one is well justified in considering as established the dependence of the localization principle and the isolation principle upon the structure and function of the cochlear system, at least in that part of it related to the peripheral neurones and the primary centers. This is a principle which has long been recognized in the optic system.—*A. L. Shnirman* (Lenin-grad).

2375. *von Ledebur, J. F. Der Erregungsstoffwechsel der Nervenzentren bei direkter und bei reflektorischer Reizung. Zur Kenntnis des Alles-oder-Nichts Gesetz. III.* (The metabolism of excitation of the nerve centers by direct and by reflex stimulation. Pertaining to information on the all or nothing law. III.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 235-245.—Direct electrical stimulation of the normal frog's spinal cord produces a marked increase in carbonic acid production, which can be increased by raising the intensity of the stimulus, contrary to the all or nothing law. Strychnine does not affect the result. Reflex excitation by the sensory nerve produces little or no increase in the gaseous metabolism, although strychninized cord shows an increase. Increase of stimulus produces no increase in the acid. Such stimulation therefore obeys the law. It is pointed out that the direct electrical method is thus unsuited to investigation of physiological events during stimulation, for it leads to results different from those produced by reflex excitation.—*L. T. Spencer* (Yale).

[See also abstracts 2378, 2422.]

MOTOR PHENOMENA AND ACTION

2376. *Downey, J. E. Types of dextrality and their implications. Amer. J. Psychol.*, 1927, **38**, 317-367.—A statistical survey of about 1500 individuals shows impressively the value of considering both unimanual and bimanual performances in the study of dextrality. Rife's classification was used, in which right- or left-handed persons are divided into three types each, according as they use the preferred hand in bimanual operations; and certain additional types are delineated. The percentage distribution of these types shows some significant differences between superior and inferior men and between men and women. Contrasting types are characterized by many transitional forms, and the term "type" is used only as a convenient mode of description. The matter of a fixating eye is important, but it seems from the present data impossible to believe that as a usual thing the dominant eye determined handedness, or even the reverse. The fact that one thumb rather than the other is outside when the hands are clasped seems to have some significance, since a dominant left thumb appears to indicate latent sinistrality. The spade foot is determined by bimanual dexterity. There is some evidence that dextrality groups may be characterized by such structural factors as difference in bone-measurements and in finger-print patterns for the two hands, and that certain motor and psychic differences are bound up with differences in degree of unidextrality. A number of problems for further investigation are suggested.—*G. J. Rich* (Institute for Juvenile Research).

2377. *Eggen, J. B. Is instinct an entity? J. Abn. & Soc. Psychol.*, 1926, **21**, 38-51.—The concept of instinct presents an egregious lack of unity which prevents the identification of instinct with other forms of response. The various things which psychologists have found indistinguishable, or only distinguishable with difficulty, from instinct, are clues to the various factors which enter into it and aid in the analysis of its diversity. The three current conceptions of instinct as an organic force, as a neural concatenation, and as a pattern of activity

are identified with emotion, reflexes, and habit, respectively. All "instinctive behavior" can be interpreted in these terms. These distinctions are of use in resolving persistently mooted questions in this field. In the matter of the consciousness of the instincts, for example, reflex acts are not conscious, emotions are patently quite so, while habit complexes contain a variable amount of consciousness. The difficulties in differentiating instinct and emotion, in determining the number of human instincts, and the question whether man has more instincts than animals can likewise be resolved. Instinct may be defined as a compartment-term including a diverse assortment of responses; it has varied at different times among (1) a force back of behavior, (2) a neural concatenation back of behavior, and (3) a pattern form of behavior; the responses it includes are emotions, reflexes and habits, or complexes of them; its usage carries the general implication of innateness, adaptiveness or automaticity and the special implication only of obscure etiology. Since it has no characteristics not derived from the component response forms its usage along with them is either a pleonasm or an animistic way of thinking. The widespread adoption of instincts by the social sciences is condemned as a dependence upon obscure and unknown forces.—E. N. Brush (Boston Psychopathic Hospital).

2378. Golant, R. [On the pathogeny of Bekhterev's ulnar phenomenon and the Chvostek symptom on the basis of a study of the galvanic irritability of the neuromuscular apparatus.] *Sbornik, posvyashennyy V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 407-412.—The author studied the galvanic irritability of the neuromuscular apparatus and the influence of adrenalin upon it in different nerves. The findings show: (1) that the relation of the threshold of stimulation of the galvanic tetanus to the prompt convulsion ("KSZ and ASZ") which, as the author has shown elsewhere, is characteristic of the kind of sympathetic innervation of the neuromuscular mechanism, is different for different nerves; (2) that the relation of the threshold of stimulation to the prompt convulsion is, for all the nerves studied by the author, smallest in the ulnar and peroneal nerves, and greatest in the facial nerve; (3) that this difference is even more pronounced under the influence of adrenalin, since adrenalin, which diminishes the foregoing relation, exercises the greatest effect on the ulnar nerve and a lesser effect on the facial nerve, which leads to strength and duration. These results obviously are closely related to the clinical observations which show that the ulnar phenomenon is associated with an increased sympathetic tonus and the Chvostek symptom with a decreased sympathetic tonus. In any case the exact character of this relation is not yet clear.—R. Golant (Leningrad).

2379. Groebels, F. *Die Lage- und Bewegungsreflexe der Vögel. IV. Der Effekt der galvanischen Reizung der Bogengänge und Ampullen auf die Lage- und Bewegungsreflexe der Haustaube. Zugleich ein Beitrag zur Strömungstheorie.* (The posture and movement reflexes of birds. IV. The effect of galvanic stimulation of the semicircular canals and ampullae on the posture and movement reflexes of the domestic pigeon. With a contribution to the convection current theory.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 216, 507-524.—Reactions are described, resulting from galvanic stimulation of the semicircular canals and ampullae, for the head, neck, wings, tail and legs. Operative findings agree with those obtained by stimulation. The movements of flight are analyzed on the basis of the findings.—L. T. Spencer (Yale).

2380. Judin, A. *Über die Erregbarkeitssteigerung der Muskeln.* (On the increase of excitability of muscle.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 17-23.—Every stimulus results in an increase in excitability, depending in amount upon the strength of the stimulus, and also upon the strength of a sub-maximal tetanus preceding it. This increased excitability conditions the greater

contraction in superposed twitches and in tetanus. The Treppe phenomenon is also based upon this increase.—*L. T. Spencer* (Yale).

2381. **Lewin, K.** *Untersuchungen zur Handlungs- und Affektpsychologie.*
IV. Schwarz, G. *Über Rückfälligkeit bei Umgewöhnung.* (Investigations on the psychology of action and affection. IV. Reversions which occur with habit substitution.) *Psychol. Forsch.*, 1927, 9, 86-158.—An old association *ab* does not always block a subsequent *ac* association nor recur more readily than *ac*. Primacy and recency are insufficient principles. Instead, the reversion to old associations depends upon (1) their conformity to basic needs ("accustomed needs"), as in the drug addict, and (2) upon their conformity to well-established general behavior patterns (such as the handling of one's watch or the turning of a doorknob). As an experimental demonstration, marbles are dropped into a slot machine, then ejected by lowering a handle and caught as they come out of the machine—all three actions are done with the right hand alone as a continuous pattern of behavior. When the act becomes practised the ejecting handle is reversed so that it must be raised instead of lowered. Thus an interference of habits is developed. The task is complicated by arranging certain orders in which the (colored) marbles are dropped into the slot machine; and also by arranging patterns in which the marbles are deposited after they come out of the machine. These two complications allow the emphasis of the whole task to be placed on the initial and terminal aspects, and away from the middle aspect of the reversible handle. Thus one's attitude of attack is regulated from an attentive spread over the whole task to an attentive focus upon the critical task of properly pressing upward or downward upon the handle. With difficult initial and terminal complications an "error of reversal" is the rule; with moderately difficult complications an "error of indecision" occurs. Thus the total task determines the associative bonds of the parts.—*W. S. Hulin* (Princeton).

2382. **Markelov, G. I.** [The reflexes of rhythm.] *Sbornik, posvyashennyy V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 125-132.—The factors which act in a rhythmic manner present peculiarities which arise from the nature of rhythm itself, as from a regular form of movement—from the static and dynamic elements in rhythmic formations. The reactions to rhythmic excitation are found in the newborn infant and have all the characteristics of reflexes. The rhythmic factors influence the affective and emotional sphere in a particularly profound manner. As new components are included in the reflex arc these reactions pass from the domain of purely emotional reactions, and that transformation is accompanied by the diminution of their kinetic character. In this manner the different forms of the life of rhythm come to be known. These are based on the adaptation of the internal rhythm to the multiplicity of the rhythms of movement and are projected back into the rhythmic forms.—*G. I. Markelov* (Odessa).

2383. **Myasishchev, V. N.** [The correlation between internal and external reactions.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, 2, 202-217.—A parallel investigation of reactions of different sorts results in a material that is of interest not only from the standpoint of the general study of personality, but also of its typical variations. In the present work the correlation between a motor, localized reaction of the hand and an internal reaction restoring the general condition of the organism (the breathing reaction) is investigated. From the differential standpoint a different accentuation of the two reflexes is especially to be noticed. (1) An excitable type with both reactions sharply marked, (2) opposed to this the torpid type, and (3) a type with partial excitability of one or the other reflexes, are to be differentiated. These correlations are related to characteristic constitutional

biological and pathological types. As an example in this respect of the excitable type a Basedow patient, and of the torpid, a myxedema patient, will serve. A differentiation of the types in conjunction with partial irritability must be the object of further investigation. In the dynamics of the correlations between external and internal reflexes, the experimentally established fact of the strengthening of the inner reaction with a weakening of the outer, appears as essential to the understanding of the pathogenesis of the different nerve conditions. An insufficient inhibition of the external reaction with high irritability both in its external and in its internal components, permits in any case an establishment of two essential groups, an impulsive and an inhibiting character, which constitute an essential factor of the pathoplasticity of a series of morbid forms whose poles are on the one hand the so-called impulsive delusion, and on the other psychasthenia.—A. L. Shnirman (Leningrad).

2384. Petrov, T. P., & Lapitskii, D. A. [The question of the dual nature of excitation.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, 2, 102–114.—The present work, which is founded on the dual inhibition theory of L. L. Vasilyev, gives the following results: (1) With the development of K' parabiosis and cathodic depression there is observed a strengthening of clonicity, which expresses itself in the fact that even strong stimuli which are sent off by the points which lie higher and produce a tetanus under the normal condition, produce in the case given here clonic contractions of the muscles. (2) With the development of K' parabiosis and cathodic depression the three stages of Vedenski clearly appear (transformation, paradox and inhibition stages). With the application of anode and Ca" the paradox stage cannot always be observed, and then only in a poorly marked form. (3) With the application of K' and cathode appears as a third stage, the "dis-inhibition" stage—the inhibition stage with anode and Ca" substituted. (4) With the action of the anode and Ca" there reveals itself another stage—the "passing"; with K' and cathode such a stage is not to be observed. (5) Anode and Ca" produce a fluctuating threshold value, which is not the case with K' and cathode. (6) According to N. K. Perna, the conducting capacity disappears at the cathode 11 times more quickly than at the anode. The same relation exists between K' and Ca", i.e., 1:11. On the average the conducting capacity with K' disappears after about 15 minutes, with Ca" after about 2½ hours.—A. L. Shnirman (Leningrad).

2385. Ptschelina, A. Einfluss des Muskelarbeit auf die sekretorische Tätigkeit des Pankreas bei Hund. (Influence of muscular work on the secretory activity of the pancreas in the dog.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 250–260.—Secretion by the pancreas when muscular work immediately precedes feeding is increased with scanty ferment-content after light work and is decreased with greater ferment-content after heavy work. Some variations from these generalizations were found for certain types of food, e.g., meat.—L. T. Spencer (Yale).

2386. Roncati, C. L'enzimoreazione e la sinforeazione nello studio della costituzione individuale. (The enzyme reaction and the synpho-reaction in the study of the individual constitution.) *Giorn. di psich. clin. e tecn. manic.*, 1927, A 55, No. 1–2.—In consequence of the idea of Abderhalden that specific ferments are found in blood serum, the author, following the recent researches of certain Italian authors (Sivori, Rebaudi and Menniti), assumes that the extracts of disintegrated endocrine glands can serve as indicators of the function of the glands themselves. He has made many researches by the skin puncture method; he concludes that the results obtained by him have no practical value.—G. Vidoni (Genoa).

2387. Serejski, M. Endocrinology and psychiatry; some problems. *J. Nerv. & Ment. Dis.*, 1927, 66, 15–21.—The article contains a review of the prog-

ress in the study of endocrinology, its growing complexity, and the need of further study along certain lines, especially in relation to psychiatry. There have been attempts to find the basis of the bio-chemical nature of the hormones; Abderhalden's method of finding the dysfunction of the glands has been used and discarded; Fischer and Weil have made studies on eunuchoidism; progress has been noted in the work on the syndrome called mongolism; Kretschmer has endeavored to give us a universal theory on questions of characterology and constitution. Further investigations should consider the differentiation of "pathogenetic" and "pathological" endocrine disorders, the pathological rôle of endocrine glands and their various phases of activity, and *vice versa* the influence of the psychical factor on the activity of the endocrine glands.—*E. C. Whitman* (Boston Psychopathic Hospital).

2388. **Ukhtomski, A. A.** [Concerning the condition of excitation in dominance.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, 2, 3-15.—By reason of the results of the experiments of M. N. Blatova, where a systematic comparison between Vedensky's "hysteriosis" and the condition of dominance was carried out, the author assumes that it is not possible in the characterization of the condition of excitation in the dominance, to limit it by the specification of a high degree of local irritability; there must certainly be considered the special conditions which assist in doing this, so that the center would be capable of summing its excitations on the part of the indifferent impulses which reach it. In general one must at the outset refer to the following characteristics, the total of which characterizes the condition of excitation in dominance: (1) relatively heightened irritability of the center; (2) temporal stability of the local nervous excitation; (3) capacity of the center to summate the excitations by the stream of indifferent impulses, and (4) excitation inertia, i.e., the capacity of the mechanism to retain the excitation already begun, and also to continue it, when the original excitation-stimulation has disappeared. Impulses which belong to a definite reflex can consume the excitation in another reflector apparatus, and thus transform the course of the reaction at its next change. The same thing will occur every time that a second, different reflecting apparatus corresponds to the four designated conditions; i.e., the fate of the reaction in the most general case is not decided by the starting point of the excitations, but rather by their destination or receiving-place. With the appearance of the reaction the importance of the irradiating impulses will become greater in comparison with the impulses which develop in the accustomed way, in so far as they meet on their way stations which are strongly excitable and capable of summing in themselves a stable and lasting excitation.—*A. L. Shnirman* (Leningrad).

2389. **Umrath, K.** *Das Refraktärstadium quergestreifter Muskeln bei Alkoholeinwirkung.* (The refractory phase of striped muscle under the effects of alcohol.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 11-16.—The absolute refractory phase of the sartorius muscle of the frog varies from 0.3 σ to about 1.0 σ at 14-18° C. This value is lengthened by solutions of alcohol of 2-6% by volume. With 4.5% solution the duration reached from 4.5 to 13.5 times the normal value.—*L. T. Spencer* (Yale).

2390. **Vasilyv, L. L., & Knyaseva, A. A.** [Inhibition as a factor in fatigue.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, 2, 59-75.—It was the object of the above mentioned article to discover the differentiating symptoms of a genuine central inhibition in typical cases of fatigue. The fatigue was produced by continued work at the dynamograph and at the ergograph. In all of the 36 experiments with 7 persons the same observation was made: the height to which the weight was lifted, and also the working capacity of the finger, became regularly greater immediately

after the rhythm had been made slower. This symptom (following the theory of N. E. Vedensky) may be best explained by admitting that the pessimal stimulating conditions for the motor centers are being changed into optimal ones. After maximal work at the dynamograph in the space of a minute an increase of the working capacity was observed. This symptom may be explained in the following way: The state of inhibition in the motor centers is being relieved by the exciting stage according to the principle that "excitation follows inhibition." The result is an increase of the working capacity some time after the labor has been finished. In 24 experiments (out of 35) made with 5 persons by means of the ergograph an increase of the work capacity for the extensors was observed after a fatigue of the finger-flexors, compared to their average working ability which had been tested before the experiment; inversely, there was an increase of the work capacity of the flexors after a fatigue of the extensors. The inhibition of the motor extensor centers is accompanied by a facilitation of the antagonistic flexor centers. This is the third characteristic of a genuine inhibition.—A. L. Shnirman (Leningrad).

[See also abstracts 2356, 2357, 2419, 2440, 2482, 2486.]

PLANT AND ANIMAL BEHAVIOR

2391. Draeseke, J. [Contributions to the knowledge of the brain of the *Hystriidae*.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 11-26.—In respect to their brain anatomy the *Hystriidae* are divided into ground porcupines and tree porcupines, into representatives of the Old World and the New. The tree porcupines, representatives of the New World, namely *Erethizon* and *Coendu* (*Cercolabes*) according to their brain structure, seem to stand in close phylogenetic relationship to each other. The ground porcupines, representatives of the Old World, *Hystrix* and *Atherura*, do not stand in such close phylogenetic relationship according to their brain structure. Ten illustrations of anatomical preparations of the brain confirm the author's results.—A. L. Shnirman (Leningrad).

2392. Hertz, M. *Beobachtungen an gefangenen Rabenvögeln*. (Observations on captive ravens.) *Psychol. Forsch.*, 1926, 8, 336-397.—The free and natural behavior of two crows and a jackdaw is studied according to Köhler's method of animal observation. In the birds' visual perception of space the most significant behavior is found in their eye-movements. These birds can converge their eyes until both eyes look straight ahead (like an owl's), and in moments of heightened attention the head is motionless and the eyes are fixated; when in panic the birds stand with their backs to an object, the eyes turn backward (like a snipe's) and the head is turned rapidly from side to side; in depth perception there are marked pupillary movements. These abilities indicate superior intelligence. Mental development in the birds is outlined through many anecdotes concerning the selection of food, the evasion or dislodgment of obstacles, the reactions to cage and experimenter, the hiding, hunting and play.—W. S. Hulin (Princeton).

2393. Pavlovski, E. N., & Perfiliev, P. P. [Metamorphosis of the axolotl in an *Amblystoma* with exclusion of the function of the lungs.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 7-10.—The operation of lung removal in the axolotl holds back the process of growth itself from four months to almost double that amount. The removal of one or both lungs with a favorable stimulation of the metamorphosis by thyroxin does not influence the possibility of the completion of the metamorphosis. A metamorphosis stimulated by means

of thyroxin proceeds independently of the impossibility of an actual transition of the axolotl to lung breathing. The lungs of the axolotl, as is also the case with other amphibians, regenerate. In a deficiency of lung breathing and a reduction of the gills the breathing takes place through the mucous membrane of the mouth (the attached net of vessels). The regenerations of the lungs function, as is shown by their hyperemia.—*E. N. Pavlovski & P. P. Perfiliev* (Leningrad).

2394. **Staritsin, S.** [The method of eliciting the associative-motor reflexes in dogs by the stimulation of the soles of the paws.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 133-146.—The method of eliciting the associative-motor reflexes in dogs was discussed in the dissertation of Dr. Protopopov which appeared from the Bekhterev Laboratory in 1911. The following are the characteristics of the method: The dog is held fast in a frame with main braces in the form of leather sleeves which are drawn over all of the paws. The excitation of the skin is effected on the lower third of the hip by means of an electric current produced by electrodes attached to a girdle. The author offers the following method: The dogs are held by a neckband and a broad girdle around the body. By means of a flat electrode a stimulation is produced on the soles, which serve as a place of natural stimulation. In this manner uniform reflexes of defense are called forth. This method has a number of advantages. (1) The reflex of defense which arises from physiological conditions through the stimulation of a single group of muscles has the character of a single elementary reflex. (2) The time required for preparation to perform the experiment is shortened, the associative reflexes are elicited more quickly and last longer. (3) The strength of the electric current required for the stimulation is moderate, since the soles are very sensitive. (4) The feet of the dog remain free. (5) The experiment requires no special arrangements, since it can be performed in almost normal surroundings.—*A. L. Shnirman* (Leningrad).

2395. **Stone, C. P., & Sturman-Huble, M.** Food vs. sex as incentives for male rats on the maze learning problem. *Amer. J. Psychol.*, 1927, 38, 403-408.—The present results, obtained from two groups of nine animals each, justify the tentative conclusion that food and sex are approximately equal as incentives to the learning and running of both simple and complex mazes by one-year-old male rats. The feeding and sex activity of the two groups were approximately equalized by using one as the incentive and providing the other in the home cage.—*G. J. Rich* (Institute for Juvenile Research).

2396. **Wilkinson, E. S.** Some observations on birds in Shanghai from June to November. *China Journal*, 1927, 6, 140-144.—The behavior of many familiar birds during the summer season in Shanghai was recorded. (1) The Indian cuckoo (*Cuculus microptera*) comes to Shanghai at the beginning of May and goes in the middle of June. (2) The golden oriole arrives at the end of April and disappears after the end of August, but the young probably stay until the beginning of October. (3) The grey shrikes leave earlier than the red-backed shrikes. Both kinds are known for singing. Although the shrike, sitting on a tree or fence, jerking his long thin tail up and down and shrieking "Wark! Wark! Wark! Beat-it, Beat-it, Beat-it," does not strike one as a likely songster, he has a soft and pleasing song when he cares to use it. They are obvious mimics and combine the notes of the bulbul, blackbird and any other common birds of the neighborhood. The author noticed that shrikes sing more regularly in dull weather, and peculiarly just before a rain-storm. (4) The crested minah is an amusing mimic. "He will begin with a harsh shriek, then chatter like a starling, whistle shrilly and finally break off into a very pleasant song imitating every known bird and probably a few unknown ones. When he tires of this he will give you an imitation of a chicken, a cat, a dog and a Morris car putting the brakes on, after which he will burst into song again without pausing for a breath.

It is not to be wondered that these birds are so often kept by Chinese in cages, when they will readily learn to talk and perform like a parrot." (5) The hand-some magpies could be seen daily playing the childish game of "touch" on the lawns, and "King of the Castle" on the fences. (6) The bulbuls sing briskly all the summer. The young were easily distinguishable by their habit of dropping their wings while feeding. (7) The nightjars are evening and night feeders. "Presumably owing to their small and weak feet, they rest in a squatting position, and if they sit on a branch or fence they will always sit along it and not across it. Their supposed partiality for the company of goats has earned them the unlovely name of goatsucker, but ornithologists tell us that they are after the surrounding flies and not the milk, as the name would suggest." The bird has a peculiar call, generally said to resemble the whirr of machinery. (8) One species of coot or rail was observed to display the typical low flight following a long run, finally disappearing in the nearest bed of reeds. (9) A large number of kingfishers were frequently seen in pairs. They haunt ornamental ponds and steal pet goldfish. They probably nest at the end of a deep hole in the bank of the creek, perhaps in a disused rats' burrow. (10) The thrushes are hard to identify because there are forty-eight varieties on the China coast. They are winter visitors, although they may be seen at this time feeding in small parties, and are taken to be migrants. (11) Another thrush of smaller size and more variegated hue was also observed. (12) One bird similar to a large wagtail called "Pai-T'ou Tse" (white head) was entirely new to the author and was observed to search for worms on the lawn with a swift run and a hop as it sighted its quarry.—*S. K. Chou* (Stanford).

[See also abstract 2379.]

EVOLUTION AND HEREDITY

2397. **Clay, W. M., & Wilcox, E. M.** Five generations of an inferior family. *J. Hered.*, 1927, 18, 121-123.—Twenty individuals covering five generations of a biologically and socially unfit family are described. The members of this family tended to marry individuals as degenerate or worse than themselves, with the result that the members of each generation were more undesirable than those of the preceding generation.—*B. S. Burks* (Stanford).

2398. **Huestis, R. B., & Otto, T. P.** The grades of related students. *J. Hered.*, 1927, 18, 225-226.—Siblings in attendance at the University of Oregon since 1919 were compared as to their grade points earned in courses taken during their sophomore year. Sisters averaged slightly higher and were somewhat less variable than brothers. The correlation between grade points of 38 pairs of sisters was $.61 \pm .07$; 26 pairs of brothers, $.74 \pm .06$; 36 pairs of brothers and sisters, $.04 \pm .11$. A possible explanation suggested for the low correlation between brothers and sisters is that "brothers are more liable than their sisters to be partially self-supporting and more liable to be interested in athletics."—*B. S. Burks* (Stanford).

2399. **Laughlin, H. H.** The legislation of voluntary eugenical sterilization. *Eug. Rev.*, 1927, 19, 12-18.—The relative merits of segregation, sterilization, and birth control, and the conditions under which sterilization might properly be voluntary, are discussed briefly. A proposed statute providing for voluntary eugenical sterilization and proposed legal forms which would comply with legal authority to perform voluntary eugenical sterilization are drafted.—*B. S. Burks* (Stanford).

2400. **Siemens, H. W.** The diagnosis of identity in twins. *J. Hered.*, 1927, 18, 201-209.—First commenting upon the criteria for establishing the identity of

twins recently proposed by H. J. Muller, the author publishes a scheme which he has used for a number of years for determining single or double origin of twins. This consists of a list of (1) traits which agree in one-egg twins almost always and almost completely, in two-egg twins only rarely; (2) traits which vary only within narrow limits among one-egg twins, and which usually vary more widely among two-egg twins; (3) traits in which one-egg twins usually, two-egg twins only rarely show strong resemblances to each other. By the use of this scheme he believes he is justified in stating that "an actual mistake in determining the identity of twins need never occur." Original data are reported upon a pair of twins almost indistinguishable before one of them was taken sick in their tenth year. Since that time marked somatic differences have developed, but certain resemblances have been retained such as occur only in identical twins.—*B. S. Burks (Stanford)*.

2401. **Smith, G. E.** *Essays on the evolution of man.* (2d Ed.) London: Oxford Univ. Press, 1927. Pp. xii + 195. 12 s. 6 d.—The second edition of this series of essays contains additional material relative to the interpretation of the finding in regard to the Taungs ape and Piltdown man. A fuller discussion of the significance of right- and left-handedness, the erect posture, and skill in work and play, is found in the last chapter. The author supports the contention that in all the variations of structure through which man evolved, the brain led the way. The development of the visual capacities which made possible the skilled guidance of manual movements, particularly those of the right hand, conferred upon man his intellectual supremacy because the brain developed in such a way as to make learning and understanding attainable through the practise of skilled manipulation. The facts which give validity to this assumption are summarized with reference to the author's detailed study of the endocranial casts of the known Hominoids, their immediate ancestors and their subsequent variations which culminated in modern man.—*S. N. Stevens (Northwestern)*.

2402. **Sommer, R.** [The form of the papillary lines of the fingers with reference to the Mendelian law.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 1-6.—100 fingerprints made from 10 persons who were not blood relatives demonstrate that when the right and left thumbs are compared they present a 3:2 relationship between the loop type and the vortex type, while the little fingers correspond in the presence of the loop type exclusively. In general the loop form exceeds the vortex type in the results of these 10 persons by about four times. Thus there appears in the total quotient a remarkable approximation to the number which according to the so-called Mendelian law would have a basic significance.—*A. L. Shnirman (Leningrad)*.

2403. **Tredgold, A. F.** *Mental disease in relation to eugenics.* *Eug. Rev.*, 1927, 19, 1-11.—This article is the published version of the author's recent Galton Lecture. The idea is advanced as a "working hypothesis" that the various forms of mental defect (feeble-mindedness), disorder (insanity) and decay (deterioration) "are manifestations of one and the same condition; namely, an impairment or devitalization of the germ cell." Evidence for this hypothesis is not given. A plea is made for legislation to curb the reproduction of the mentally unfit.—*B. S. Burks (Stanford)*.

SPECIAL MENTAL CONDITIONS

2404. **Adler, A.** *Character and talent.* *Harpers*, 1927, 155, 64-72.—Adler discounts the old thesis that character and talent are inherited and fixed, and with a variety of cases attempts to prove that "talent, potentiality, endowment, special gifts, are merely elements in the structure of an individual." How these elements are used depends on the total personality in which they reside and on

the environment of that personality. The dominant motif or goal of the individual reveals more of him than does his physical inheritance. "In fact it is probable that an organism equipped with deficient organs, with inadequate tools, will actually develop a better and more ingenious technic to combat the rigors of its environment." More important than the defect itself is the *sense* of the defect and what the environment says of the defect. Courage combined with adequate training are at the basis of so-called "talent." Given this combination, everyone excepting congenital idiots and imbeciles may become "talented" in spite of organic defects.—*A. L. Allport* (Dartmouth).

2405. **Dumas, G. Le choc émotionnel.** (Emotional excitation.) *Rev. phil.*, 1927, 52, 337-394.—The results of the experimentation begun by Franck and Dumas prior to the war and recently continued by Dumas are here set forth. The first section of the paper deals with cranial vaso-motor changes. Having as material 4 trepanned subjects, Dumas confirmed the earlier work of Mosso that certain long undulations of vaso-motor origin occur independently of respiration under the influence of slight intellectual effort or little emotional excitation, but contrary to Mosso these undulations were relatively dependent on the cardiac and general arterial pressure. Mosso had claimed that all psychic excitation of the brain results in vaso-dilation, thus facilitating irrigation of that organ and making the individual readier for defense. In order to compensate for this exaggerated dilation, vaso-motor constriction occurred in cutaneous and muscular extremities. Contrarily, Franck and Dumas reported no such consistent change; any type of variation might take place under emotional excitation from vaso-motor dilation to constriction not only in the cerebrum but in the vaso-motor system throughout the organism. Any one of these possibilities may manifest itself in the same individual upon different occasions. A conclusion is thus reached that the vaso-motor reflexes of the brain that follow excitations are not only not psychic but that they have nothing specifically cerebral; they function as do all other blood vessels. The second general topic discussed is the conditions under which these vaso-motor reactions occur. The third and last section deals with fluctuations in the heart and respiration rates in emotional excitation. Under these conditions the brain acts as do the skin and muscles in physical excitation. In light emotional shock acceleration of heart and respiration take place, whereas inversely in intense shock inhibition occurs. Direct stimulation of the cortex has the same effect.—*T. M. Abel* (Cornell).

2406. **Emery, E. V. N. Revising our attitude towards sex.** *Ment. Hygiene*, 1927, 11, 324-338.—Attitudes towards sex arise in early childhood. If unwholesome attitudes are engendered, sex conflict results, with unhappiness both in childhood and in adult life. If parents are to teach their children the proper attitude toward sex they must in many cases not only acquire knowledge which they usually lack, but must revise their own point of view towards the anatomy, psychology and physiology of reproduction.—*G. J. Rich* (Institute for Juvenile Research).

2407. **Goddard, H. H. A case of dual personality.** *J. Abn. & Soc. Psychol.*, 1926, 21, 170-191.—A case of dual personality in an intelligent and apparently healthy young woman of 19 is reported here. There were frequent transitions from one personality to the other, these transitions nearly always taking place during sleep. Norma, nearest like the normal personality, was quiet and reserved, in marked contrast to the other personality, Polly, who appeared first as a four-year-old. While having many phases, she was in general "loud, coarse, wilful, emotional, changeable, disobedient, selfish, egotistical, excitable and unreasonable." She was usually totally anaesthetic. Later, Polly appeared as fifteen years old, and it was thought that if she became nineteen the personalities would merge, so the first attempt to resynthesize the personality was an attempt to get Polly up to the same age as Norma. This failed, and next she was kept in

the Norma stage as much as possible, the procedure being to hypnotize her and wake her up as Norma. The third and successful plan was that of restoring the memory of one personality for the other. There was then a struggle to overcome nerve habits which had been formed, with the occasional reappearance of Polly. What seemed at first to be another personality was discovered to be a case of amnesia. It was discouraged and after a short period did not reappear. The early history of the girl is outlined in some detail, and its relations to the phenomena present in the case are pointed out. Theoretical aspects of the case are discussed. There seem to be two factors in dual personality, as far as this case is concerned. First, a divided mental life, and second, a nervous system deficient in energy. There is probably some causal connection between the two factors.—*E. N. Brush* (Boston Psychopathic Hospital).

2408. **Heidbreder, E.** *Measuring introversion and extroversion.* *J. Abn. & Soc. Psychol.*, 1926, **21**, 120-134.—Freyd's list of introvert traits was applied as a rating scale to 900 students at the University of Minnesota. Of these a random sample was chosen and made the basis of this study. Although the study is merely preliminary and exploratory the results seem to justify the following statements: (1) Introverts and extroverts are not distinct types, but belong to a single mixed type of which introversion and extroversion are extremes; (2) the central tendency of the group shows an appreciable deviation toward extroversion, according to the scale used; (3) individuals tend to rate themselves as more introverted than their associates judge them to be; (4) there is greater agreement between self-ratings and associates' ratings than between the ratings of two associates; and (5) on the basis of statistical analysis, Freyd's list is justified as an instrument for distinguishing between introverts and extroverts.—*E. N. Brush* (Boston Psychopathic Hospital).

2409. **Janet, P.** *La peur de l'action.* (Fear of action.) *Rev. phil.*, 1927, **52**, 321-336.—In this article Janet offers a novel explanation for the behavior of melancholics. The basis of their perverted ideas and sentiments lies in fear and this fear in turn refers to their own actions toward objects and events rather than to the objects and events themselves. Now in fear of action, as in fear of objects, there is above all an arrest of action. This arrest, which Janet calls check reaction, is a regulator in all conduct. Thus we are able to modify our conduct and adapt ourselves to a changing environment. Among individuals suffering from a depressive psychosis the fear of action presents itself as a check regulation that inhibits the primary action, replacing it by another action, but especially substituting an action directly opposite in nature. Janet means here that the beginning of an act, that is, the desire, becomes inverted, as for instance in the case of the mother who wants to show all care and tenderness in bathing her child, but feels at the same time that she desires to cook and drown her. To explain the cause of such an exaggeration and perversion of the check reaction Janet reverts to his theory of psychic energy; a considerable weakening of this energy brings about these distortions.—*T. M. Abel* (Cornell).

2410. **Mukherjee, K. C.** *Sex in Tantras.* *J. Abn. & Soc. Psychol.*, 1926, **21**, 65-74.—A consideration of the content of the Tantras, a series of Sanskrit sacred writings, shows that the sex motive runs throughout. In the account of the deities and their activities, the creation, and resulting human nature sex is of prime importance, and much sex symbolism can be made out. The sexual libido excited in the conjugal embrace of the deities seems to become differentiated in the manifold activities of creation. The energy pervading the universe is ultimately derived from the sex libido. What human nature inherits is fundamentally the Tamas, i.e. the desire as related to sexuality. A rather detailed account is given of the Tantric conception of human nature, and suggestions are made for translating it into terms of modern psychology and even physiology. Support is lent to many of the Freudian theories by the material presented.—*E. N. Brush* (Boston Psychopathic Hospital).

2411. **Mursell, J. K.** *The logic of sublimation: a criticism.* *J. Abn. & Soc. Psychol.*, 1926, 21, 75-84.—At first sight the notion of sublimation seems quite plausible, but with closer scrutiny doubts arise. Ordinarily we are told that there are three possible outcomes to the conflict between the libido and the conventional demands of society—the formation of perversions, the development of neurotic symptoms, and sublimation. Now two further alternatives are mentioned—reaction-formation and idealization, both of which are of doubtful validity. These various processes of sublimation, reaction-formation and idealization, so subtly distinguished from one another, and so often inherently dubious, never work themselves out where we can easily and directly observe them. How do we know that they ever take place at all, and what evidence is there that primitive tendencies can be attached to very complex and sophisticated types of behavior without losing their original character and identity? The obvious facts of behavior show nothing of all this. The theory of sublimation is based on the procedure of “exploring the unconscious” by free association, or by applying the theory of recapitulation. The free association method will not yield satisfactory evidence, and the recapitulation notion which underlies the psychoanalytic theory of symbolism is wholly without basis in ascertained fact. The “economic” viewpoint of Freud, involving the notion of a quantity of mental energy, has been put forward to explain and support sublimation, but this conception is not based on facts and runs counter to all our real knowledge of mental life. The essential truth to which the theory of sublimation is a standing testimony is that there is nothing more important for the well-being of the individual than that he shall have a free and unimpeded psychic development, particularly in the affective sphere. All the conditions laid down as favoring successful sublimation point to an explanation in which the concept can be wholly eliminated. The conclusion must be that the concept of sublimation is based on a logic that is radically faulty, and that the facts with which it proposes to deal can be explained very well along totally different lines.—*E. N. Brush* (Boston Psychopathic Hospital).

2412. **Oliver, J. R.** *Fear (The autobiography of James Edwards).* New York: Macmillan, 1927. Pp. viii + 364.—In narrative form is presented the gradual breakdown of a middle-aged business man harassed by fears. The genetic basis of his fear-neurosis is traced from the simple fears of childhood to those of later life which became so much entangled with a variety of compulsive rituals that expert therapy had to be sought. The main portion of the book presents in detail the psychotherapy applied and stresses its close relation to religion.—*A. L. Allport* (Dartmouth).

2413. **Pende, N., Cignolini, —, Galluppi, —, Gelena, —, & Vidoni, G.** *Biottipologia umana ed ortogenesi.* (Human biotypology and orthogenesis.) Genoa: Typ. editrice Sociale, 1927. Pp. 227. 20 lire.—This volume presents a review of the first 100 cases studied in the Biotypological-Orthogenic Institute of the University of Genoa and contains 200 illustrations. In the introduction Pende explains the fundamental principles of biotypology, which, according to his conception, concerns itself with the entire morphological, functional, humoral or bioclinical, and psychological study of human types, as well as the behavior patterns and life reactions, or biotypes, i.e., the principal categories of constitution, temperament and character, which by unifying scientific analysis and modern logic may be extracted from the apparent chaos of the innumerable varieties of human individuals. Pende himself has constructed a biotypological profile, basing it upon the changing details in the behavior of the subject in the course of his development. In regard to psychic life, we find that the profile takes into account the development of the fundamental instincts (intuition, reproduction, offense, defense), the affective-ethical development, the sensitive-sensory development, the development of attention, perception, memory, general intelligence,

fantastic or mythical thought, realistic or concrete thought, the temperamental tone, abstract and logical thought, the degree of sensible discrimination, and the development of the will.—*G. Vidoni* (Genoa).

2414. **Taylor, W. S.** *Character and abnormal psychology.* *J. Abn. & Soc. Psychol.*, 1926, 21, 85–86.—Character may be defined in terms of ethically effective organization of all the forces of an individual. Such a definition takes account of modern ethical conceptions and seems to express the fundamental interest of all students of abnormal psychology. It serves to distinguish character from other aspects of personality.—*E. N. Brush* (Boston Psychopathic Hospital).

2415. **Rouhier, A.** *Sur la plante qui fait les yeux émerveillés: les fêtes du peyotl.* (The plant which produces visual hallucinations: the fêtes of peyote.) *Aesculape*, 1927, 17, 41–46.—Peyote is not a poison for intelligence. It does not act upon any voluntary or intellectual faculties of man. It causes a veritable dream, evoked in the manner of a cinematographic projection, with colored and multiple visions. Peyote causes curious sensory disorders. The phenomenon of colored hearing manifests itself in all its force, permitting the translation of a musical poem into images. Rarely hallucinatory in the real sense of the term, this production of images varies according to the intellectuality of the subject, and the author proposes peyote as a psychoanalytical reagent rendering to the waking state and to full consciousness an involuntary interpretation of dreams, an exact interpreter of the subject's unconscious.—*Math. H. Piéron* (Sorbonne).

2416. **Valentine, P. F.** *The psychology of personality.* New York: Appleton, 1927. Pp. xi + 393. \$2.50.—Personality is defined as the sum total of one's habit dispositions, habit being taken to include all acquired reactions, intellectual, motor, and affective. The author states that "the purpose of the present volume is to set forth a consistent theory of personality based upon scientific psychology. The writer has tried to accomplish this in a manner that will appeal not only to the avowed student but to the interested lay reader. Difficult problems and intensive analyses have not been avoided for the sake of simplicity; but an effort has been made throughout to introduce clear illustrations and clarifying explanations." The book contains the following chapters: the nature of personality; habit the key to personality; the distribution of traits; instinct: tyrant or ghost?; feeling: the leaven in personality; the question of personality types; character; brains; intelligence: a gift or an attainment?; problems of the unconscious; the dynamics of behavior; measurements of personality; how to create personality.—*J. R. Liggett* (California, So. Br.).

2417. **Vidoni, G.** *Contributo allo studio del suicidio con speciale riguardo all'età e al sesso.* (Contribution to the study of suicide with special regard to age and sex.) *Giorn. di psych. clin. e tecn. manic.*, 1927, A 55, No. 1–2.—The author here treats of the cases of suicide attempted or accomplished in Genoa during twenty-five months. According to his observations suicide is apparently rare before the age of 15 years; the number of cases increases up to 25 years, diminishes from 25 to 30 years, remains stationary up to 45 years, and declines steadily thereafter. Among women the greatest number occurs at 20 years, falling off slowly up to about 30 years. It was not possible for the author to construct a regular curve for the cases of attempted suicide which were followed by death. That sequence is more frequent among men. The author concludes with a consideration of the correlation of this study with the studies and observations of suicide in other countries.—*G. Vidoni* (Genoa).

2418. **Yoakum, C. S., & Manson, G. E.** *Self-ratings as a means of determining trait relationships and relative desirability of traits.* *J. Abn. & Soc. Psychol.*, 1926, 21, 52–64.—Some experimental evidence is found to support the statement that synonyms are descriptive of closely related traits. Whether this relationship is produced by a recognition of the similarity or is the result of language habits is not shown. Such constellations clearly exist. Their origin is not

established. Apparently relative desirability, objectively considered, exists. It can be exhibited by the use of the indirect method, using the technique of self-ratings. Speaking generally, individual variability in ratings is a function of the time interval. No clear relation appeared between objective tests of the volitional type and the trait terms used in this study.—*E. N. Brush* (Boston Psychopathic Hospital).

2419. **Zwonitzka, A.** [Reflexology and the problem of personality.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoj deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 95–104.—The existing psychological systems still show in their methods of investigation the traces of subjectivism. Reflexology as conceived by V. M. Bekhterev studies the individual only to supplement the strictly objective methods. It considers his reactions and his behavior as a complete report of his personality and thus removes the problem of the dualism between the psychic and the physical. It examines the individual from the point of view of his innate equipment and of the equipment acquired in the course of his social life, considering personality as a bio-social unity. It is not the selection of adjustments to biological life which dominates in human society, but the selection of adjustments to social life, says Bekhterev, and the moral person is created by social selection. Thanks to its objective method, reflexology has rendered service to two applied sciences, psychiatry and pedagogy. After the founding of endocrinology, the great problem of psychiatry is on the one hand to show the influence of the innate chemical makeup of the organism on its functional reactions; on the other hand, psychiatry has for its aim the analysis of the rôle of the acute disorders which sever the connection of the individual with his social environment and modify to a certain point the chemical makeup of the organism. Reflexology, studying objectively the mimico-somatic reflexes, aids psychiatry in dealing with these problems. In point of pedagogy, studying the child as a bio-social unity, reflexology analyzes the types of biological functional activity and those of social functional activity; and, in the end, the serious recognition of the social personality of the child and the modifications of his activity is the basis of all pedagogical success.—*A. L. Shnirman* (Leningrad).

[See also abstracts 2443, 2455, 2468, 2480, 2489.]

NERVOUS AND MENTAL DISORDERS

2420. **Adler, A.** The cause and prevention of neuroses. *J. Ment. Sci.*, 1927, 73, 1–8.—Every individual is concerned with a persistent striving for superiority and power, and external reactions should be regarded in the light of this deep-seated tendency. The normal man is confronted with three great problems: (1) social relationships, the taking of some place in the world of men; (2) occupation, work as a service to mankind; (3) sex, union with a mate. The inferiority feelings of adulthood are based on the equipment of childhood and the happenings then. Especially is the child who is organically deficient or defective liable to find difficulties in facing life, and his attitude as an adult depends on his training in childhood. To insure a healthy mental life "every effort should be made to give such children enough courage to develop their social feelings, to be useful, and not to be terrified by the other sex, and if this could be done, there would be no more nervous adults."—*E. F. Symmes* (Yale).

2421. **Anfimov, W.** [Dyslypia encephalitica.] *Oboznenie psikhiatrii, neurologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1926, No. 4–5, 247–261.—In certain cases of epidemic encephalitis, when the centers of the vegetative nervous system are affected by the involvement of the mesencephalon, a disturbance in the formation and distribution of fat becomes appar-

ent, one of the most significant symptoms of encephalitis. Such changes in the fat distribution, of pluriglandular origin, may appear either as a deposition of fat in the manner of dystrophia adiposo-genitalis and myxedema, or it may cause an uneven distribution of fat, as in adiposalgia or Dercum's disease. All such changes the author combines as "dyslypia encephalitica."—A. L. Shnirman (Leningrad).

2422. **Bekhterev, V. M.** [Complex reflex phenomena of the lower extremities in lesions of the central motor neuron.] *Oboznenie psikhiiatrii, neurologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1927, No. 1-2, 1-16.—The author gives a systematic review of reflexes previously described by him (since 1900) in lesions of the central motor neuron. (Later some of these reflexes were described by P. Marie and Ch. Foix, 1910-1912.) The reflexes are: (1) contraction of the muscle of the calf and of the extensor of the thigh in quick, passive flexion of the leg at the knee, and in dorsal flexion of the foot; (2) flexion reflex of the leg in plantar flexion of the foot, or in pressure of the femur and calf muscles; (3) adduction reflex of the leg with legs extended and bent knees; (4) flexion reflex of the leg in dorsal flexion of the foot and toes on tapping the foot with the percussion hammer or on pricking the foot. The reflexes thus described are caused, according to the author, by a lesion of the motor pyramid neuron, and may be found sometimes in cases where there is neither foot clonus nor Babinsky's reflex.—A. L. Shnirman (Leningrad).

2423. **Bondarev, N. I.** [Psychosis of epidemic encephalitis.] *Oboznenie psikhiiatrii, neurologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1926, No. 4-5, 262-267.—The psychic phenomena of epidemic encephalitis, acute as well as chronic, are discussed. To the former belongs initial fantasies, which appear from one to two weeks before the complete development of the epidemic encephalitis. Among the chronic forms of psychoses, the rarest are especially emphasized, viz., the psycho-motor excitement with delirium and the catatonic form. These two forms are closely related to schizophrenia in regard to psychomobility.—A. L. Shnirman (Leningrad).

2424. **Brailovsky, V.** [On the physiology of traumatic stuporous conditions.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 427-432.—A case of stupor of psychotraumatic origin is discussed. On the 19th day of this condition, when all kinds of stimulation and psychotherapeutic methods had failed, the author tried a light etherization, which has been employed by French authors, although for different purposes. Brilliant results were secured: within two minutes of the inspiration of the remedy, thus in the first stage of the etherization, the stuporous condition disappeared and did not return. The author attempts to explain the phenomena observed by reflexology (in the sense of Bekhterev and Pavlov): the psychic trauma produced, first, a loss of muscle tone—the patient fell down; second, a vaso-motor shock—the patient lost consciousness; and, at the same time, a pronounced inhibition of the cortex, from which a stuporous condition developed, and later a continuous anterograde amnesia arose. This inhibition results from the effect of the subcortical centripetal negative (inhibitory) impulses, which exerted an inhibitory influence on the functional-labile cortex of the patient. The primary stimulating effect of the ether produced a cerebral excitation which in this case overcame the inhibition.—V. Brailovsky (Rostov a. D.).

2425. **Catalano, A.** *Sindrome mentale e parkinsonismo da encefalite epidemica in un fanciullo.* (A mental syndrome and parkinsonism of encephalitic origin in a child.) *Giorn. di psich. clin. e tecn. manic.*, 1927, A 55, No. 1-2.—The child suffered from encephalitis lethargica in 1919. Shortly after there arose some modifications of character without any signs of organic lesions. Only three years afterward the parkinsonian syndrome was also observed. After-

ward, while the hypertonicity increased, the mental troubles disappeared. After the death of the child, Catalano found deep lesions in the cerebral cortex, in the basal ganglia, in the spinal cord, and in the liver. From certain observed characteristics it was inferred that the lesions in the prefrontal region had been first, which fact explains the early appearance of the mental syndrome.—*G. Vidoni* (Genoa).

2426. **Cornwall, L. H.** **A comparison of the Vernes and Wassermann tests as applied to the spinal fluid.** *Arch. Neur. & Psychiat.*, 1927, 18, 56-72.—This report is concerned with a comparison of the results of Vernes and Wassermann tests on 490 specimens of spinal fluid from 200 patients selected from the Neurological Department of the Vanderbilt Clinic. The conclusions drawn are: (1) In 62 cases of neurosyphilis in which the Vernes and Wassermann tests were compared on repeated examinations of the spinal fluid, there was disagreement in three cases, or 4.8%. The Vernes results conformed to the clinical status of these cases fully as well as, if not better than, the Wassermann. (2) In 91 cases of neurosyphilis, the two tests were compared on only one examination of the spinal fluid from each case. There was disagreement in 14 cases, or 15.4%. In correlating these results with the clinical aspects there was little choice between the two tests. The Vernes reaction appeared to conform better to the clinical aspects in 8 cases and the Wassermann results better in 6 cases. (3) When only one examination of the spinal fluid can be made, the Vernes reaction furnishes limited information because a low reading does not necessarily exclude the possibility of neurosyphilis, and a subsequent examination might show such a rise in the optic density as to establish the presence of neurosyphilis. The same might be true of one negative Wassermann result, but the latter reaction does not show the variations in results from time to time. (4) In asymptomatic neurosyphilis or in symptomatic cases that are clinically stationary but with persistently positive Wassermann reactions in the spinal fluid, the Vernes test may furnish additional information of value in determining the therapeutic course to be pursued. (5) In cases in which the Wassermann reaction is negative but in which there is clinical evidence of pathologic activity, the Vernes test furnishes an additional laboratory method that may assist in clarifying the clinicopathologic concept of the case. (6) As an index of the character of the syphilitic infection, whether progressive, stationary or regressive, and as an index of the efficiency of therapy, the test recommends itself strongly, as it appears to measure the virulence or infectivity of the spirochetal strain in a manner that is not possible with the other tests.—*I. Rappoport* (Boston Psychopathic Hospital).

2427. **Davidenkov, S.** **[The thalamic syndrome and its clinical varieties. Contribution to the thalamo-vegetative syndrome.]** *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoj deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 433-456.—Among the diverse clinical varieties of the thalamic syndrome recently described by the French authors, the "thalamo-vegetative syndrome" of Foix, Chavany and Bascouret deserves the greatest interest. From two cases coming under his personal observation the author concludes that the syndrome in question presents peculiarities which are distinct enough, but that it can manifest itself under the aspect of different clinical varieties.—*S. Davidenkov* (Moscow).

2428. **Dieterle, R. R.** **Method for demonstration of *Spirochaeta pallida* in single microscopic sections.** *Arch. Neur. & Psychiat.*, 1927, 18, 73-80.—In the study of the pathology of infectious diseases, no known organism has offered more resistance to the possibilities of constant demonstration than *Spirochaeta pallida*. With the procedures described the spirochetes have been found more easily and constantly than with any other method. The whole procedure requires as little time and actual care as an ordinary substantive stain. The methods may be varied and the spirochetosis of general paralysis may be studied in serial section in coordination with histologic changes. The results of such studies will be reported later.—*I. Rappoport* (Boston Psychopathic Hospital).

2429. **Epshtein, A.** [Methods of neurological analysis of defective heredity. (Acrosemiology.)] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 317-330.—The author considers the nervous constitution as a diseased state arising from a faulty heredity. This diseased state undoubtedly has its etiology, its pathology, its clinical development, its semeiology and its methods of examination. Among the symptoms of the nervous constitution should be named the so-called stigmata of deterioration, of which the etiological and pathological symptoms should be studied; among these latter come the psychic, the endocrine and the neurologic stigmata (animal and vegetative). The author describes the stigmata of deterioration, applying the principle of topography, and examines the symptoms of the distal parts of the extremities (acrosemiologies) considering their reflexes, their tonus, their morphology and their sensitivity. The reflex of the sole of the foot in cases of deterioration often consists in an extension and not in a flexion as is the case in the normal state. In the same way there may be observed in the standing position of these patients the functional predominance of the tonus of extension in the position of the feet and the toes. As to the morphological side, the stigmata of deterioration are characterized by various deformities of the digits. The author calls attention to the unusual growth of the great toes and to their deformities. This occurs very often in the neuroses and in a certain number of diseases of the endocrine glands. The study of the neuropathic constitution by the use of the neurologic method permits us not only to discover the neuropathic character of a defective nervous system, but to penetrate to a certain degree into the mysteries of the pathologic mechanisms, which opens large possibilities for therapy and prophylaxis.—*A. L. Shnirman* (Leningrad).

2430. **Gendelevich, S., & Rosenberg, A.** [The blood serum membrane in mental disease.] *Oboznenie psikhiiatrii, neurologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1926, No. 3, 180-191.—The author tested fifty-one times the permeability of membrane of blood serum in 40 patients. The results were as follows: (1) The P. Q. (Permeability Quotient) is, as Walter and Hauptmann have already determined, diminished in all cases of progressive paralysis; after treatment with malaria and recurrens the P. Q. rises. (2) In *lues cerebri* psychoses the membrane is normal. (3) This difference between paralysis and *lues cerebri* may be of differential-diagnostic significance in cases which are difficult to diagnose. (4) Toxic psychosis shows, like paralysis, increased permeability of the blood serum membrane. (5) In schizophrenia no increase of the P. Q. could be demonstrated. The high P. Q. found in some cases may perhaps be due to the very youthful age of the subjects. For instance, two 13 year old children, sick with different diseases, showed a high P. Q. (6) Not only exogenous, but also endogenous factors, as for instance menstruation, may decrease the P. Q. (7) No relation of the P. Q. with the reactions of Wassermann, Nonne-Apelt, Pandey, and Weichbrodt could be determined; a certain connection with the gold sol reaction was found, and a still more pronounced parallelism with the amount of albumen contained in the blood serum.—*S. Gendelevich & A. Rosenberg* (Leningrad).

2431. **Gerver, A. V.** [The problems of prophylaxis in psychoneurology.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 611-634.—The author maintains on the basis of statistics which have been offered that the number of neuroses and psychoneuroses has increased much more formidably in the U. S. S. R. than in other countries. He looks upon these diseases as a grave social danger and recommends the most energetic efforts to conquer the evil. The hospitals are not able to accommodate more than 5% of the actual psychopaths; where and how can the others be assisted and treated? Prophylaxis is the most

important of all the measures to be taken. It is necessary to organize neuropsychiatric assistance in the form of dispensaries, and to attach the services of mental prophylaxis to medico-judicial organizations, to dispensaries for the tubercular, for the luetic, etc., as well as to other services of the public health. Special establishments with a therapeutic and educational regime should be organized for criminal psychopaths. War invalids afflicted with psychoneuroses must be treated by means of occupational therapy as well as by physiotherapeutic methods. The primary schools ought to teach children the principles of mental hygiene from the earliest age; schools of special instruction should be organized for backward children, epileptics, narcomaniacs and psychopaths.—*A. L. Shnirman* (Leningrad).

2432. **Hassin, G. B.** Acute (epidemic?) encephalitis: report of a case in a new-born twin with histologic observations. *Arch. Neur. & Psychiat.*, 1927, 18, 44-55.—Little is known of acute cerebral conditions in early infancy. Yet this may be of great importance in affording an explanation for the development of some of the epilepsies, defect conditions, etc., that prove so difficult of comprehension in later life. The case reported is of special interest because clinically nothing was observed that suggested the presence of an acute infection of the brain. The unusual features are the extreme youth of patient and type of inflammatory elements. It is hard to tell in any given case whether one is dealing with an encephalitis, a cerebral form of poliomyelitis or a similar condition. On the basis of the pathologic studies of this case and that of DaFano, and the facts furnished by experimental research, one may conclude that the case here recorded was most likely one of epidemic encephalitis, that is to say, an exogenous infectious disease. Had the child recovered, with the disease unrecognized or not even suspected, some sequelae such as epilepsy, mental deficiency, idiocy, or behavior disorder would be expected. Any of these or similar disorders observed in older children may be caused by inflammatory brain lesions occurring in early infancy.—*I. Rappoport* (Boston Psychopathic Hospital).

2433. **Hopwood, J. S.** Child murder and insanity. *J. Ment. Sci.*, 1927, 73, 95-108.—"Infanticide is commoner in insanity during lactation than in puerperal insanity or the insanity of pregnancy. It occurs in exhaustion psychosis more frequently than in other forms of insanity. An age of under 30 is a point in favor of a good prognosis. Insanity and subsequent infanticide is much more frequent in multiparae than in primiparae. The murder of her child by a young married primipara is of very rare occurrence. Previous attacks of insanity have a definite bearing on the prognosis, the chances of recovery being much lessened when there has been a previous attack. Little can be said with regard to heredity, owing to the difficulty of obtaining a reliable history. Suicidal ideas are common, being present in about 60% of the cases. In many cases the primary idea is suicide, and the homicide is secondary. The presence of the suicidal impulse is not a contra-indication of a good prognosis. Alcohol, as a causative factor, has but little importance in the insanities connected with childbirth and infanticide. Epilepsy is not common in these cases, having no greater percentage than obtains in the whole insane population. Amenorrhoea is a frequent symptom, and usually persists for some months. An early return of the menses is a point in favor of ultimate recovery. Amnesia is frequently present. It is commonest in the exhaustion psychoses, and provided it is not permanent, it is a point in favor of a good prognosis. Simulated amnesia is seldom found in the insanities of childbirth with infanticide."—*E. F. Symmes* (Yale).

2434. **Itsenko, N. M.** [On the diagnosis of tumors of the cerebellum.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 505-571.—The author describes a case of tumor of the cerebellum which was located exactly by diagnosis during life. In the clinical picture the cerebellar syndrome stood out

somewhat delicately, but still with sufficient certainty. The author particularly emphasizes the following symptoms as leading him to a localization in the cerebellum: hypotonia, asthenia of the muscles of the back, neck and trunk, inaccurate estimation of weight in the right hand—a rare symptom which is not yet clearly understood—adiadochokinesis, cerebellar asynergia, weak and almost impossible gait, sharply distinguished Romberg symptom. In conclusion the author points out the minor symptoms in his case. The ability to move forward on all fours remained intact. Another symptom, observed by the author himself, was present, viz., the increase of stimulation necessary for the release of the patellar reflexes. These were quite strong, but they appeared only after repeated blows against the tendon. The autopsy confirmed the diagnosis: tumor cerebelli vermis, right and left lobes. Microscopic study showed the tumor to be a sarcoma.—*A. L. Shnirman* (Leningrad).

2435. **Khoroshko, V. K.** [Essay on passive ergotherapy in the depressive states of cyclothymia.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 599–604.—The author applied to 20 patients passive ergotherapy (general rhythmic faradisation), after the method of Prof. Bergonié, in the depressive states of cyclothymia and circular psychosis. He observed considerable improvement in the general state and disposition of the patients, and especially a very good effect upon the sleep in the cases of insomnia. The treatment was given every other day or every day and lasted a half hour. In three cases the depressive state was changed to one of mild excitement. It may be the effect on the production of adrenalin; adrenalin plays an important rôle in our affective life on the one hand, and on the other, it is in a certain dependence upon muscular work with reference to the secretion of the suprarenal glands. The application of ergotherapy after the method of Prof. Bergonié is especially favorable to patients who are not able or rather who do not wish to engage in voluntary muscular exercise, to do gymnastic work or to make movements in general.—*A. L. Shnirman* (Leningrad).

2436. **Laignel-Lavastine, M.** [Perverse reactions of children affected with epidemic encephalitis.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 461–466.—This study treats of children who, according to their parents, appeared normal in disposition prior to attacks of encephalitis, but who displayed unsocial behavior during the months following the attacks. The perverse reactions of these children may be described as of three types: The reactions of the first type are those of hypomaniacal encephalitics; those of the second type are determined by an organic disorder, the nature of which is determined by the disease; those of the third type are the cases of children with naturally perverse dispositions, which are aggravated by the malady. The knowledge of these types is of great theoretical and practical interest. Since they indicate the importance of acquired encephalitic infection, these problems open up a new chapter in pathological etiology.—*A. L. Shnirman* (Leningrad).

2437. **Lustrizky, W. W.** [Treatment of sciatic neuralgias by the injection of physiological solution.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 605–610.—Twenty-two persons affected with sciatic neuralgia were treated by the injection of physiological solution. Considerable improvement was observed even after the fifth injection and a complete recovery was made in eleven of the patients. From these results the author concludes in favor of the value of this method.—*W. W. Lustrizky* (Leningrad).

2438. **McCartney, J. L.** *Neuropsychiatry in China.* *Arch. Neur. & Psychiat.*, 1927, 18, 87–95.—To date there are not any national government hospitals for the insane in China. Patients with mental defects constitute a helpless class.

If caught on the street doing anything unusual, they are arrested and thrown into prison as if they were criminals. As the head of the family is usually responsible for the injurious acts of any of its members, psychopathic patients who are dangerous are rigidly confined either at home or in a monastery. The disposition to treat them cruelly is enhanced by the fear and dislike inspired by the belief that a psychosis is due to possession by evil spirits. Exorcism is a common practice as a means of "psychotherapy." Another method is for the "witch doctor" to say incantations over the patient. Other methods of similar nature are described. Mental and nervous diseases in China are not uncommon; the political and social changes through which China is now passing, the impact of civilization, the incessant influx of new and disturbing ideas and the keener and wider competition in business will make these diseases still more common in the future.—*I. Rappoport* (Boston Psychopathic Hospital).

2439. **McCowan, P. K., & Harris, J. S.** Chronic epidemic encephalitis. *J. Ment. Sci.*, 1927, **73**, 40-50.—"Hyocine is of undoubted value in the Parkinsonism of chronic encephalitis; its action is a specific one; its value is objectively demonstrable, amongst other methods, by its effect on the blood-sugar curve, which is made to approximate the normal curve. Although only temporary in action, prolonged use does not lead to tolerance or any deleterious effects. Usually by hypodermic administration only can the full benefit of hyocine be obtained, but in some cases benefit followed oral exhibition. It is undoubtedly much superior to belladonna or stramonium in the treatment of encephalitic Parkinsonism. The functional element in this disease is probably due to a lesion in or around the basal ganglia, and it has been suggested that an analogous lesion may account for similar symptoms in hysteria, chorea, Wilson's disease, etc. Although no recovery can be claimed at present for the use of such drugs as tryparsamide and argotropin in the treatment of chronic encephalitis, it is hoped that time will show that they have been successful in the attack on the encephalitic virus as shown by the prevention of any further progress of the disease. Oral hygiene is an important subsidiary line of treatment in the chronic encephalitic."—*E. F. Symmes* (Yale).

2440. **Molony, C. B.** Endocrine therapy and the psychoses. *J. Ment. Sci.*, 1927, **73**, 64-80.—"No case of mental disorder, more particularly if it supervenes at puberty or the menopause, however advanced or hopeless, should be considered incurable until disordered endocrine function has been definitely excluded, whether this be done by the absence of characteristic symptoms or by the failure of response to organotherapy. Endocrine therapy fulfils a very important and useful role in the treatment of psychoses in carefully selected cases. Compound ovarian extract, in private practice, will obviate the necessity for certification in many cases. Polyglandular dyscrasias are the rule in the endocrine psychoses, and pluriglandular therapy should give the highest percentage of satisfactory results. The fact that physiologists have not yet succeeded in isolating the hormones or chalones of certain of the ductless glands, and therefore cannot demonstrate, by experiments on animals, whether these hormones or chalones are or are not absorbed unaltered from the digestive tract, is no justification for our denying to our patients the benefits clinically proved to accrue from the oral administration of extracts of these endocrine organs."—*E. F. Symmes* (Yale).

2441. **Pavlovsky, L.** [The influence of music on the insane.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 589-598.—Patients suffering from various psychic and mental ailments were made to listen to systematic and varied concerts organized for this purpose in 1925 at the Second Asylum for the Insane at Leningrad. During the concerts the attitude of the patients was observed, and also their reactions while listening to the different musical works. It was proved that the effect of sad compositions was generally more

lasting than that of gay and exciting selections. However, the latter often provoked among the patients the desire to dance and run. The music produced the least influence on the manic-depressive and the greatest on the epileptics. In short, the patients listened to the concerts with pleasure and interest and the author is of the opinion that good music which exercises a salutary effect on the insane could have a psychotherapeutic value in some cases, on condition that the selections were well rendered and in their entirety; for fragments and isolated chords do not produce any effect.—*A. L. Shnirman* (Leningrad).

2442. **Platonov, K. I., & Istomin, P. P.** [On the problem of the genesis and therapy of epileptic attacks.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 495-504.—From statements in the literature and from their own observations the authors attempt to determine the possibility that positive results can be secured on a certain group of presumed epileptics by means of hypno-suggestive influence. The first case seems particularly significant. In this case attacks were not only produced through suggestion under hypnosis, but their appearance could be conditioned to any time desired. Such phenomena are intelligible from the standpoint of reflexology, and through them it seems possible to establish scientifically the practicability of hypno-therapy in such cases. A departure from the routine must be made in the treatment of "genuine epilepsy." It must further be taken into account that in a certain number of cases so called genuine epilepsy can develop in the manner of conditioned reflexes after psychic trauma. The authors refer to the psychic, associative and chemical reflexive factors in the developmental mechanism of epilepsy, namely to those factors which by hereditary, congenital or acquired disposition to the epileptic form of reaction, produce the influence of chemical processes on the visceral nervous system.—*A. L. Shnirman* (Leningrad).

2443. **Rizzatti, E.** *A proposito della genesi del sonno.* (In regard to disturbances of sleep.) *Giorn. di psich. clin. e tecn. manic.*, 1927, A 55, No. 1-2.—A case of postencephalitic narcolepsy. In consequence of the concept that encephalitis lethargica may be an affection of the basal ganglia, the author assumes that the inflammatory nature of the affection is accompanied by hyperaemia, which causes an anemia of the cerebral cortex, which, in turn, is caused by the narcolepsy observed by him. Has normal sleep an analogous origin?—*G. Vidoni* (Genoa).

2444. **Sharp, C. J.** *June eighth, 1927.* *Tr. School Bull.*, 1927, 24, 59-62.—This article gives an account of the Annual Day at the Training School in Vine-land, N. J. A financial secretary has been appointed and it is hoped that \$350,000 will be raised. This sum is needed to carry out definite needs and to establish an endowment fund for research.—*E. M. Achilles* (Columbia).

2445. **Stookey, B.** *Intradural spinal lipoma: Report of a case and symptoms for ten years in a child aged eleven; review of the literature.* *Arch. Neur. & Psychiat.*, 1927, 18, 16-43.—(1) Intradural spinal lipomas are heterotopic neoplasms, probably arising from inclusions at the time of the formation of the neural tube. They are usually pure lipomas. (2) Extradural spinal lipomas are usually mixed neoplasms. They may be found associated with intradural neoplasms such as angiomas or gliomas. (3) Intradural spinal lipomas are found more often in those regions of the neural tube which are late to close; namely, the cervical and sacral hiatuses. (4) An intradural spinal lipoma may be a congenital neoplasm giving rise to spinal cord signs first noticeable when a child begins to walk. Spinal cord neoplasm should be suspected in a child with tetraplegia, and a manometric study of the cerebrospinal fluid should be made. (5) Spinal cord signs may at first be indefinite; they are slowly progressive. (6) The duration of symptoms may be for years—the average duration in children was five and in adults ten years. (7) A roentgenogram may show enlarge-

ment of the vertebrae overlying the neoplasm. (8) Most intradural lipomas are both intramedullary and extramedullary, without any sharp line of demarcation separating the tumor from the spinal cord. When a line of demarcation cannot be readily made out, too strenuous attempts to remove the tumor should not be made, since removal of the intramedullary part does not seem to be possible. (9) When not removable, the capsule, usually consisting of the pia-arachnoid, should not be split and the dura left open.—*I. Rappoport* (Boston Psychopathic Hospital).

2446. **Strecker, E. A., & Willey, G. F.** Prognosis in schizophrenia. *J. Ment. Sci.*, 1927, **73**, 9-39.—“Thirty-eight cases diagnosed as dementia praecox, but terminating in recovery, were analyzed from the standpoint of potential prognostic indications occurring either before or during the attack of mental disease. The chief considerations were race, history, both familial and personal, personality, pre-psychotic somatic state, precipitating situation, onset, and the psychic and physical phenomena of the psychosis itself.” Of these factors, study of the personality makeup, the precipitating situation, and transition stage from sanity to insanity is most revealing in regard to prognosis. The outlook is not necessarily hopeless if the psychosis seems to be an evolution of pre-psychotic idiosyncrasies of character with no deterioration of personality implied; if the precipitating situation is innately significant and the psychotic content reflects its component factors; if the onset is acute and stormy; if infection or exhaustion enters in to a marked degree, though imparting to a psychosis a deteriorating guise; and if the psychosis as a total reaction constitutes an escape and psychotic correction of serious circumstances in life. The outlook is more often unfavorable when there is affective display which is markedly at variance with the remainder of the psychotic content or a notable insufficiency of affect is exhibited.—*E. F. Symmes* (Yale).

2447. **Sullivan, O. M.** The interrelation between occupational therapy and subsequent vocational or industrial rehabilitation. *Occup. Therap. & Rehab.*, 1927, **6**, 175-180.—Urges the closeness of the interrelation. “Occupational therapy is the best and most desirable foundation on which to project vocational rehabilitation, and vocational rehabilitation is often the essential phase to complete the restoration process begun by occupational therapy”. Cites difficulties of attempted rehabilitation without previous therapy. If the therapy has been adequate, the patient comes to the rehabilitation worker in better physical and, especially, in better mental condition, with less depression and with a new consciousness of his vocational powers. The occupational therapy aide is the logical one to bring the patient in touch with the rehabilitation agency and can provide valuable information as to the patient's history and traits. It is socially desirable to recognise the unity of the problem of restoring the disabled.—*H. E. Burt* (Ohio State).

2448. **Thompson, R.** The etiology, psycho-pathology, and treatment of mental exhaustion and paranoid states. *J. Ment. Sci.*, 1927, **73**, 51-63.—The treatment of mental exhaustion must be approached from a different angle from that of paranoid states. At the very beginning the patient should be given a simple, clear and definite picture of his illness and its causes, stressing the fact that such illnesses are common. The main object is to relieve the patient's mind from anxiety. The main worries discovered, it is advisable not to encourage outbursts of confidence, with revelations of intimate matters, especially dealing with the sex life, which he may regret later. For anemia met with in these patients, prolonged course of iron is indicated. Bromides lessen the intensity of depression in depressed patients; but on the other hand they apparently aggravate the excitement of maniacal patients. Early treatment of paranoid states is difficult, as these patients rarely consult a doctor, but if possible they should be reached through relatives or when they come seeking advice for depression or sleepless-

ness. Usually the only effective treatment is an immediate and lengthy change of environment. Congenial occupation is above all to be selected and a full program provided, stopping short of exhaustion, of course. Treatment in a mental hospital is to be avoided, as it serves as a proof to the patient that he is a victim of conspiracy or persecution.—*E. F. Symmes* (Yale).

2449. **Weisenburg, T. H., & Alpers, B. J.** Decerebrate rigidity following encephalitis: report of a case with necropsy. *Arch. Neur. & Psychiat.*, 1927, 18, 1-15.—Most of the cases of marked rigidity in encephalitis up to the present time have been described as cases of catatonia or catalepsy. Observations and conclusions drawn here are based on one case thoroughly studied both clinically and pathologically. Pathologically, inflammatory and degenerative changes were found in the substantia nigra, and degenerative changes chiefly, with some inflammatory signs, in the nucleus ruber. The pathologic observations coincide with the views of Weed, Brown, and Wilson in attributing to destructive lesions in the nucleus ruber an important rôle in the production of decerebrate rigidity.—*I. Rappoport* (Boston Psychopathic Hospital).

2450. **Young, H. T. P.** Observations on the prison psychoses. *J. Ment. Sci.*, 1927, 73, 80-95.—The term prison psychosis should be applied only to those who have no history of mental or nervous disease apart from their prison records. However, lifelong observation would be necessary to discover how far the insanity developed while undergoing sentence, and whether it could be attributed entirely to the imprisonment. Of 300 convicts observed 19 showed disordered states of a prison type. The recovery from the disorder on discharge from prison resembles in some cases the solution of a conflict in persons who have suffered from nervous symptoms as a result of an accident, when their claim for damages is settled by monetary compensation. The development of the symptoms is not rapid as a rule, a period of 6 to 18 months being usually required. The majority of the cases were in either the third or fourth decades. Other etiological factors such as septic infections, monotonous labor conditions, masturbation, endocrine imbalance, and alcoholism apparently were not contributory in these cases.—*E. F. Symmes* (Yale).

2451. **Zampler, A.** [Camptocormia.] *Giorn. di psich. clin. e tecn. manic.*, 1927, A 55, No. 1-2.—Two similar cases, of which one is of psychogenic origin (in a dementia praecox patient) without lesions of the vertebral joints.—*G. Vidoni* (Genoa).

2452. **Zuccari, G.** L'alcolismo nelle provincie della Romagna nel quinquennio 1920-1925. (Alcoholism in the province of Romagna in 1920-1925.) *Giorn. di psich. clin. e tecn. manic.*, 1927, A 55, No. 1-2.—Statistical study on psychopathies among some insane individuals in the provinces of Forlì and Ravenna, where alcohol enters as a direct determining cause. The author recognizes 15.19% of alcoholic psychopaths among the men, 1.29% among the women. The majority of cases is found among individuals between 40 and 50 years of age, a period in which 85.51% of all the cases is found. Zuccari calculates for the province of Forlì .56 per thousand, and .66 for that of Ravenna. A slight increase of alcoholic psychoses, apparently having a relation to the late war, has been observed in the rural classes.—*G. Vidoni* (Genoa).

[See also abstracts 2334, 2349, 2372, 2387, 2403, 2405, 2463, 2472, 2488, 2491, 2495, 2499, 2500.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

2453. **Abbott, E.** Social Science Research Council; Report of Committee on Scientific Aspects of Human Migration, Dec. 18, 1926. Chicago: S. S. R. C., 1927. Pp. 36.—The field is comprised in six divisions: (A) statistical problems;

(B) emigration conditions in Europe and other continents; (C) economic aspects of human migration; (D) legal and administrative policies in countries of immigration and emigration; (E) historical aspects of human migration; (F) social studies. No projects have been undertaken under (D) or (E); under (A) there are two—world-statistics of migration, by Walter F. Willcox, Cornell University, and negro migration in the South, by Frank A. Ross, Columbia University; under (B) one—causes of Swedish immigration, by Florence Janson, Rockford College; under (C) two—immigration and the mechanization of industry, by Harry Jerome, University of Wisconsin, and the Mexican labor problem in California, by Paul Taylor, University of California; and under (F) one—antecedents of Mexican immigration, by Manuel Gamio, Mexico. These projects are described in some detail. Allied investigations of other organizations are noted, among which may be mentioned C. C. Brigham's project for internationalizing mental measurement.—*R. R. Willoughby (Clark)*.

2454. **Allport, F. H.** *The psychology of nationalism.* *Harpers*, 1927, 155, 291-301.—An analysis of the popular and scientific conceptions of the nation to demonstrate that "the former accepts uncritically a reality projected behind our national symbols and conveyed to us in the language of metaphor", and that the latter "formulates the nation as existing solely in the behavior of its individuals." Three reasons are presented for the prevalence of the popular conception: "first, because it carries the force of emotional habits conditioned early in childhood by the use of symbols; second, because it affords a socially approved method of raising an individual's estimate of himself, and third, because it is an unrecognized manner of obtaining, under the guise of patriotism, certain special privileges." The power of this belief is most clearly revealed in the declaration and conduct of war ("the honor of the Nation" must be defended from the "Enemy"). At such a time this belief more than ever becomes a subtle instrument in the manipulations of jingoist and propagandist. Only insight (the recognition of the popular fallacy and acceptance of the scientific conception) can direct the emotional loyalties of individuals to their "Nation" into peaceful channels.—*A. L. Allport (Dartmouth)*.

2455. **Bowden, A. O.** *A study of the personality of student leaders in colleges in the United States.* *J. Abn. & Soc. Psychol.*, 1926, 21, 149-160.—Personality may be considered as composed of two groups of factors, physical and social. The distinctive factors that go into the cause of popularity and influence of leaders are not so much physical as social. Personality may be considered a social product, the adjustment tendencies of the individual to his social environment. In view of the place of the school in the development of personality, the kind of personality possessed by student leaders is of interest. In this study, a modification of the methods used by the Allports was used, and the presidents of the student body or student councils in forty colleges served as subjects. The graphs made show that all these young men are well balanced. All are of the ascendant type, and most are of the extroverted, expansive social type. Most of them also have splendid insight and good judgment. There are no "freak" personalities in the group. Sample graphs are included.—*E. N. Brusk (Boston Psychopathic Hospital)*.

2456. **Davis, J., Barnes, H. E., Huntington, E., Hankins, F. H., Bernard, L. L., Willey, M. M., & Eldridge, S.** *An introduction to sociology.* New York: Heath, 1927. Pp. xxiv + 926. \$4.48.—This volume is the result of the collaboration of seven prominent sociologists. It is unique in offering the cultural and the behavioristic approaches to the study of human society, in its use of the case method, and in its supplementation with a second volume of readings to be used in conjunction with the first. The volume is divided into four main books. "The evolution of the great society" is the title of Book I, which is written by Harry Elmer Barnes. It is an exposition of social growth from the genetic point

of view and serves as an historical guide to the understanding of modern social problems. Book II, "The forces shaping society," is the joint contribution of Ellsworth Huntington, who discusses society in its physical environmental relations, Professor Hankins, on the biological aspects of society, L. L. Bernard, who discusses the psychological foundations of society from the behavioristic viewpoint, and Malcolm M. Willey, presenting the cultural point of view in sociology. The third book is by Seba Eldridge and is entitled "Social organization," while Book IV, written by Jerome Davis, deals with the application of sociological principles to modern social problems. The book is supplied throughout with references to the "Readings," the companion volume, as well as questions on the readings. Besides these references a number of cases, along with lists of suggestive problems for further study, are inserted after each chapter. The chapter bibliographies are adequate throughout the entire volume.—*F. A. Geldard* (Clark).

2457. **Delacroix, H.** *Psychologie de l'art.* (The psychology of art.) Paris: Alcan. Pp. 483. 50 frs.—The material is presented in two parts. In the first, comprising five chapters, are presented the more general conditions of aesthetic activity: (1) The world and play; play and art. Contrary to Schiller and the German romanticists, the author does not consider art as play. Play, he says, is indifferent to the material, the "playthings" are but the symbols by which the player expresses his interests and his purpose. The artist, on the contrary, begins with a love of the material of his art in itself and for itself, and the work is the last word in art and his secret aim. The activity of art is more complex than that of play. Art possesses the joy of creation, as does play, but it creates a harmonious reality, it constructs a world which imposes itself on the soul because of its order and its laws. Play is, perhaps, a primitive form of art, but it becomes art only when the player is an artist. (2) The animation of the universe. The animation of the world is very truly the condition of art, as it is the condition of all inner life. (3) The contemplation of ideas. Art is not merely the contemplation of ideas; it is the realization of the imagination. The so-called external data never present themselves in a pure state, but are always elaborated by the mind. There are no aesthetic principles without a vision of an artist, and a vision of an artist is already a work of art. (4) The aesthetic state, the artist and the production. Art is not only an immediate attitude of impression and expression, and even in the new schools, in spite of their claim of a pure psychological automatism in the expression of thought, the inner reflective thought and the accentuated realism are still stylisms. They suppose a selection and an arrangement. Art consists in a direction of purpose and an adjustment of the expression to the purpose. In the second part, comprising four chapters, the author completes his analysis by some concrete examples borrowed from the leading arts: the principal elements of music, the varieties of musical experience, poetic art, and talent for painting. In summary, art supposes an activity of play and a sympathy, by which either the man of taste or the artist projects himself into others or into nature. But art is also creation which replaces the everyday world by an artificial world, where the spirit finds satisfaction because it is formed according to its idea; art tends to direct effort toward the thought of the absolute; hence the mystical ecstasy. The artistic picture is never the representation of a thing or a state; it is a movement, an act, which expresses the feeling. It is, in the words of the author, "the harmonious activity of the mental functions, a subjective harmony of the faculties of perception which show themselves in the feeling itself." There is no bibliography at the end of the volume, but there are numerous bibliographical footnotes.—*Math. H. Piéron* (Sorbonne).

2458. **de Laguna, G. A.** *Speech: its function and development.* New Haven: Yale Univ. Press, 1927. Pp. xii + 363. \$5.00.—The author abandons the viewpoint of metaphysical dualism, which conceives speech as an external physical expression of an inner psychical process, and adopts a standpoint which

regards speech as a method of coördinating the activities of men. The appearance of speech in the race is as important for behavior as the appearance of the distance-receptors. Speech differs from the cries of animals in the following respects: (1) it is an independent form of behavior and not merely an element in a larger response; (2) it need not be dependent upon the emotional state of the subject; and (3) speech may specify and analyze a situation in addition to proclaiming the presence of a certain situation as is done by the animal cry. The evolution of speech from the cry resulted from the changed conditions which man met when he abandoned an arboreal life. This change involved an increase in group solidarity which demanded the use of a symbolism suitable for the determination of various forms of behavior. Cries which, e.g., signified only a dangerous situation were replaced by speech which not only specified the dangerous situation but also indicated whether the group should run or fight. In Part I of the book, the author discusses the rôle of speech in society; in Part II, aspects of mental evolution; and in Part III, the rôle of speech in the life of the individual. Among the topics treated in Part III are: the complete act of speech, human perception, conception and purpose, memory and imagination, and belief and thought. No bibliography is given.—*W. S. Hunter (Clark)*.

2459. **Durea, M. A. Psychological study and social follow-up.** *Tr. School Bull.*, 1927, 24, 49-59.—The purpose of the paper is (1) to illustrate a plan which was used in coordinating some psychological and social work done on dependent children and (2) to present a discussion of the merits of a similar method as it applies to other fields of psycho-social work. Psychological data, social follow-up data, data on nature of offences which led to replacement, and report of foster home were presented. "A systematic follow-up system not only enables one to correct psychological findings in the light of social experience, but by this constant checking of two sets of data, it is possible to derive those psychological factors which will form the best basis for a prognosis and social therapy." Illustrations from work with delinquents may be transferred to the field of crime. "It seems that a systematic check-up of intra-institutional behavior against subsequent careers on a large number of paroled criminals would make possible many corrections in parole procedure." Two basic principles underlie all ameliorative work. First the process of adjustment or supervisory treatment must be individualized and fitted to the needs of each person; second, the objective must always be the permanent rehabilitation of the subject.—*E. M. Achilles (Columbia)*.

2460. **Essertier, D. Psychologie et sociologie.** (Psychology and sociology.) Paris: Alcan. Pp. 234.—In the first part of this book the author shows that the problem of the relationship of psychology and sociology at the present time has an entirely different basis than at the time when Durkheim worked out his principles of sociological method. The collaboration of these two sciences is not only useful and desirable, but is becoming indispensable. In order that this collaboration may become effective, it has seemed necessary to the author to classify and arrange the principal works which have already treated the problem of the relation of psychology and sociology. Such is the object of the second part of the work. 458 authors and 622 publications are classified under four chief rubrics: (1) origin and development of the problem; (2) social psychology; (3) psychological sociology; (4) the actual orientation of the investigations. An author index concludes the work.—*Math. H. Piéron (Sorbonne)*.

2461. **Fairchild, H. P. Foundations of social life.** New York: Wiley. 1927. Pp. 287. \$2.75.—The author, out of his experience in teaching different branches of social science, attempts to collect together certain fundamental facts about man, society, and the world which can be accepted as *pro tempore* laws on the basis of which a science of social life may be built up; and so devotes the first 150 pages to a discussion of Room and Food as the requirements of all living be-

ings; Language and Industry as factors separating Human and Animal Life; Selection and Dispersion as responsible for Racial Evolution; Mendel's Laws to account for heredity; and the Scientific Method applied to Industry as responsible for Economic Advance. The remaining part of the book is an effort to find similar generalizations in social behavior, and so arrives at Food, the Mating Impulse, and desire for the Approval of others as the three fundamentals from which spring much of human activity; and Self-Maintenance, Self-Perpetuation, and Conformity as the great needs of society. In relation to these the author gives an elementary discussion of most of our individual and social problems.—*H. Moore* (Mt. Holyoke).

2462. **Gault, R. H.** Control experiments in relation to identification of speech sounds by aid of tactual cues. *J. Abn. & Soc. Psychol.*, 1926, **21**, 4-13.—Experiments previously reported by this author have assumed that discrimination of the forms of speech has been accomplished by the sense of touch alone. The mechanical devices used and the method of experiment are described, and some of the results of experimentation are tabulated. The control experiments demonstrate that the discriminations are made by touch alone, without the aid of hearing, either through the air, or through bone conduction to the inner ear.—*E. N. Brush* (Boston Psychopathic Hospital).

2463. **Glueck, S.** Psychiatric examination of persons accused of crime. *Ment. Hygiene*, 1927, **11**, 287-305.—The Massachusetts law providing for the examination of certain classes of accused persons, before trial, by psychiatrists of the State Department of Mental Diseases is described, and its operation for a period of five years is considered. Certain changes are desirable, more especially the extension of this system to other classes of accused persons, better administrative machinery, and better coordination by the trial judges of their disposition of cases with the experts' reports. Nevertheless, the provision for routine mental examination of accused persons represents a great advance. It reduces to a minimum the trial of persons who should be disposed of otherwise, and has brought about a marked diminution in the use of conflicting alienists in insanity cases.—*G. J. Rich* (Institute for Juvenile Research).

2464. **Howes, F.** The borderland of music and psychology. New York: Oxford, 1927. Pp. x + 244. \$2.25.—A series of 6 essays in which the author seeks to show the psychological meaning behind certain facts common to musical experience. The material is regarded as too complex and vague to admit of strictly scientific treatment, and so is approached from a combination of philosophic and scientific standpoints. The meaning of musical behavior is sought not in the behavior itself but in the conditioning factors which have made that behavior possible. The "subconscious" mind is the storehouse for musical creation and yields "intuitive flashes" when the right stimulus is presented. A work of art is a "crystallized emotion" provided by the intellect with symbols necessary for presenting it. Compensatory factors are an important element in musical creation and participation. When carried to an extreme they may lead to the creation or enjoyment of music which is sentimental and gets its attraction by appealing to infantile ego needs. Music may be measured objectively by a standard which rejects insincerity and the use of the "cliche", a "stereotyped formula (either with words or notes as symbols) borrowed at 20th hand to convey a vicarious emotion". The chief characteristic of all music is rhythm, which—looked at non-technically—is a property of the mind with "cognitive, emotional, and dynamic" elements. There is an essay on applause, which is explained in terms of the herd instinct and the need for physical movement and critical comment after mental tension.—*M. Goodrie* (Clark).

2465. **Huntington, E.** Why the American woman is unique. *Nation*, 1927, **125**, 105-106.—American women are more active and buoyant in spirit than women of the Old World because of biological, geographic, and social factors. A

strenuous natural selection, both physical and temperamental, determined the presence of the first permanent women settlers in America, who—assuming that sex-linked inheritance may be applied to temperamental traits—passed on their traits to the following generations of American women. The geographic and social factors are conditioned by biological selection: the rigorous, brisk climate and wealth of natural resources attracted women of an alert, vigorous type; these, in turn, created a stimulating environment which is a factor in keeping American women progressive.—*M. Goodrie* (Clark).

2466. **Kou-Houng-Ming. *L'esprit du peuple Chinois*.** (The spirit of the Chinese people.) (Trans. from the Chinese by P. Rival.) Paris: Stock, 1927. Pp. 182.—The author, a poet and scholar, who has studied in Edinburgh, in France, and in Germany, and served Great Britain as law licentiate to the English legation at Peking, was won back by the beauty of Confucian culture. A Chinese official, professor, and journalist, he was a follower of Chinese tradition as opposed to the mechanical European civilization. After the world war he denounced the lack of morals in Europe and attempted to teach Confucianism there. He says that if the people of Europe wish to recover from the war, and to preserve their civilization, they should renounce their Charter of Liberty in order to adopt the religion of the rights of good citizens under the great Charter of Fidelity—"such as we possess, we other Chinese." He treats in order: the spirit of the Chinese people, the Chinese woman, the Chinese language, the English in China, and the Chinese alphabet. No bibliography.—*Math. H. Piéron* (Sorbonne).

2467. **Lips, M. *Le style indirect libre*.** (The free indirect style.) Paris: Payot. Pp. 240. 25 frs.—The free indirect style makes use of two methods which reproduce (1) interior states (perception, volition, the recognition of sentiment) in the direct style, or some manifestations of interior states in the manner of the indirect style. There is a third method of reproduction which makes it possible to preserve the methods of expression appropriate to the direct style and to transpose the tense and personal pronouns as in the subordinated indirect. It is a literary method which is found in all languages. It became a literary method thanks to two opposed and successive attitudes: the veiled style and the impersonal style. It is the result of the tendency to the progressive unification of the languages of modern societies. Bibliography of more than 200 volumes at the end of the work.—*Math. H. Piéron* (Sorbonne).

2468. **McCartney, J. L. *Psycho-analysis and Chinese characters*.** *China Journal*, 1927, 6, 145-150.—After stressing the fact that unconscious processes often reveal themselves in the form of symbolism in prehistoric paintings, sculpture and written characters, the author asserts that "along this line the study of Chinese writing affords an opportunity to gather facts bearing on the question of symbolism in primitive word formations that is absolutely unparalleled in any other linguistic field." "The Chinese written language is a thing of beauty to those able to appreciate its symbolism. It is said to have taken originally the form of knotted cords and then of notches on wood. Later it was formed by rude outlines of natural objects, and then went on to the phonetic system, in which each character is composed of two parts, the radical, indicating the meaning, and the phonetic, indicating the sound. They are symbols, non-agglutinative and non-inflectional, and are written in vertical columns (or in horizontal rows), probably from having in early times been painted or cut on strips of bark." Eighty to ninety thousand characters are generally estimated. "Each character is composed of from one to fifty-four separate strokes. Not content with this confusion, ingenious scribes have evolved a series of fanciful adaptations and distortions, or variants. There are, for instance, forty-two ways of forming the character for the word *precious*, a hundred and six for *happiness*, and a hundred

and sixty for *longevity*." Three stages of development were recognized, namely, the pictogram stage, the ideogram stage, and the phonogram stage. In the pictogram stage, the characters represent simple pictures of the ideas of concrete objects. Many of the signs for such universal subjects as the sun, flowing water, rain and mountains are identical in the early Chinese and Egyptian records. In the ideogram stage, abstract ideas are represented. The principle is to combine two simple characters of the first stage to form a new character denoting some abstract meaning by virtue of their association. For example, "woman" and "boy" form "good", while "sun" resting on the "horizon" denotes "morning". In the phonogram stage, the new word or character is also formed or compounded by two simple ones, one indicating the idea and the other the sound. The idea and the sound are indicated respectively in the word "goose" by "bird" and "I" and in the word "mother" by "woman" and "horse". When the idea-indicating component of the word becomes the component of a great number of words, it is usually known as the radical, into which all the characters may be classified and arranged as in a dictionary. Some of the most common radicals are illustrated. Under the radical character for "woman" there occurs: woman + to take = a wife, one taken with legal ceremonies; woman + stone = jealousy; woman + eyebrow = passionate glances (hanging from her eyebrow). Under the radical character for "heart", which also means "mind", there occur: heart + green = the human passions (seven in number: joy, anger, sorrow, fear, love, hatred, lust) (English = "green with envy"; "green, bilious with rage"); heart + center = loyal; heart + blood = sorrow (bleeding heart); mind + to divide = anger. Under the radical for "man" there occur: man + words = truthfulness; man + right hand = to help; man + mountain = hermit; man + fire = a comrade. The laws of association may be illustrated by some further examples: shelter + woman = tranquillity, peace; sword + stained = to kill; fire + water = calamity, plagues; evening + dimness = to dream. It is in the study of these groups of characters, the ideograms and the phonograms that a mass of analytic material is to be obtained. The author predicts that "an awakening, the like of which no history records, awaits the world when the libido of the Chinese people, now entangled in the intricacies of their writing and fixated at the ideographic period in the evolution of the alphabet, becomes freed and directed toward a socially constructive national enterprise."—*S. K. Chou* (Stanford).

2469. **Moran, H., & Pratt, C. C.** Variability of judgments on musical intervals. *J. Exper. Psychol.*, 1926, 9, 492-500.—The present study was undertaken with the purpose of finding the range over which two tones of different pitch may vary without altering the psychological characteristics of the interval. Three observers, with musical experience, were instructed to adjust the tones until they approximated as closely as possible a given musical interval. The data from these judgments yield an average liminal value of 18 cents (hundredths of equal semitones), an interval slightly less than a fifth of a semitone. The "psycho-physical" interval has a range of variability, then, of about 40 cents. Adjacent intervals of the tempered musical scale are 100 cents apart. The psychological characteristics of intervals which lie between those in ordinary use are not such as would result in assimilation to the nearest musical intervals. There is a range of about an equal semitone midway between each tempered interval within which an interval would not be recognized as either of the familiar intervals next above and below it. The order of intervals, ranked according to precision of judgment, is approximately the same as that for degrees of fusion.—*F. A. Pattie* (Harvard).

2470. **Nelles, F. C.** Work at Whittier State School. *J. Delinq.*, 1927, 11, 69-71.—*H. L. Koch* (Texas).

* 2471. **Orbison, T.** *The prevention of crime in mental deviates.* *J. Delinq.*, 1927, 11, 100-105.—It is the author's opinion that the crimes committed by mental deviates can by proper prophylactic measures be avoided. Figures are presented to show that a large per cent (about 75) of the delinquents in three of California's representative institutions are dull, border-line, or feeble-minded. It is also claimed that Boston, which carries on an extensive mental hygiene program, not only has less crime than does Chicago, which is particularly lax in its efforts to deal with the mental deviate, but also that only about one-fifth as many of Boston's criminals are mentally aberrant as are Chicago's.—*H. L. Koch* (Texas).

2472. **Overholser, W.** *Psychiatry and the treatment of offenders.* *Ment. Hygiene*, 1927, 11, 306-323.—The notion of punishment as a means of revenge is being abandoned; but great store is laid by many on the deterrent value of prison sentences. There is, however, a group of individuals which is not deterred by possible penalties. This group includes the psychotic, the mentally defective, and the epileptic, types that do not profit by the conventional prison treatment. They return to society to repeat their anti-social conduct, after having learned new ways of offending. Repeated sentences mean repeated offenses, with damage to property or persons. From a preventive point of view, indefinite commitment and psychiatric supervision are desirable.—*G. J. Rich* (Institute for Juvenile Research).

2473. **Shepard, J. B.** *The physical education program at Whittier State School.* *J. Delinq.*, 1927, 11, 88-99.—*H. L. Koch* (Texas).

2474. **Takanashi, Y.** *Clothes and selection of their colors.* *Kokumin Eisei* (National Hygiene), 1925, 2, No. 8.—In winter and at night clothes help to maintain our body temperature against cold air. For this purpose the colors of garments have little influence on the radiation of heat from the body surface. But in summer, particularly under direct sunlight, clothes serve to protect our body from external heat. For this purpose a proper selection of colors for garments becomes a problem far from being negligible. Experiments were made to see the effect on an absorbing body exposed to sunlight and placed inside of a covering made of white, black, red, and other colored cloth. It was found that an increase in temperature of the absorbing body was the least when protected by black cloth, the next least when protected by colored cloth, the greatest inside of white covering. Hence it is advisable that a parasol should be made of black cloth, if it is to be used exclusively for heat protection.—*J. G. Yoshioka* (California).

2475. **Tao, T. Y.** *A statistical study of Chinese words expressing virtues and vices.* *Chinese J. Psychol.*, 1924, 3, No. 2, 33.—This is the first part of an article by the author, who, by tediously looking through the entire text of the first and perhaps the most exhaustive Chinese dictionary, "Kong-Hsi Dictionary," took down all words expressing virtues or vices as they appeared under each radical. The meaning of each word is recorded for further analytical study in the next article. It was found that out of altogether 882 words thus recorded, 330 or 37.41% express virtues while 552 or 62.59% express vices.—*S. K. Chou* (Stanford).

2476. **Tao, T. Y.** *A statistical study of Chinese words expressing virtues and vices.* *Chinese J. Psychol.*, 1924, 3, No. 3, 44.—This is the second part of an article by the author. Here an analytical, classificatory study revealed that 50.90% of the words expressing virtues and 65.22% of the words expressing vices fall under seven radicals. Five of the radicals are common in both cases although they are not in the same order, namely, the radicals that mean "heart", "speech", "man", "woman", and "mouth". 14.24% of the words expressing virtues come under the radical "heart" while 20.83% of the words expressing vices come under the radical "speech". Taken together, these five radicals em-

brace 53.28% of the total words expressing both meanings. Taking the actual meaning of each word as criterion, 42 classes or groups were found for the words expressing virtues and 51 for those expressing vices. There were six groups in the former and four in the latter that are directly connected or related to "woman" in meaning. 64.21% of the words expressing virtues are related to "politeness", "honesty", "carefulness", "uprightness", "gentleness", "industry", "speech", and "kindness" while "speech", "cheating", "greediness", "rudeness", "stealing", "indulgence", "accusation" and "pride" represent 60.14% of the words expressing vices. If the opposites "honesty" and "cheating", "speech" in the good sense and "speech" in the bad sense, "politeness" and "rudeness", "carefulness" and "indulgence" were paired and the total words taken together, 42.37% of the words good and bad were represented. In the light of his analysis, the author drew the following conclusions: motive and the belief that human nature is good color all Chinese moral ideas; speech plays a great rôle in the conceptions of virtue and vice, especially the latter; woman is morally conceited; there is no moral standard between the higher and the lower classes; group spirit is weak; moral ideas toward animals are rare; great attention is paid to the commonly recognized virtues; public and private virtues and vices are equally emphasized; five virtues are most commonly praised, namely, politeness, carefulness, uprightness, gentleness and kindness; cheating and bad speech are considered to be the most common vices; the degree of virtue is not so high as that of vice; gentleness, chastity, carefulness and respectableness are the virtues, and lust, indulgence, rudeness, and greediness are the vices for Chinese women.—*S. K. Chou* (Stanford).

2477. **Vollmer, A.** *The recidivist.* *J. Delinq.*, 1927, 11, 72-87.—Recidivism to the extent of 66.8% was discovered by Glueck to be present among the population at Sing Sing; and an incidence of 20% among all persons arrested for crime in California was the finding of the California State Bureau of Identification. These figures, claims the author, are evidence that the United States has a wholly unsatisfactory penal system. Reforms suggested by F. E. Williams and V. V. Anderson in the New York State prison survey report of 1922 are presented as worthy of serious consideration. Among these are: intensive study of the criminal before a sentence is passed; treatment in terms of the offender's mental and physical traits, rather than in terms of the end result of his act; extensive and intelligent segregation within the prison population; indeterminate sentences; appropriate types of education; and post-prison supervision. Sentimentalism is condemned.—*H. L. Koch* (Texas).

2478. **Weiss, A. P.** *A set of postulates for social psychology.* *J. Abn. & Soc. Psychol.*, 1926, 21, 203-211.—The fundamental assumptions underlying social psychology are the same as those underlying general psychology. Only the assumptions of natural science (physical monism) are considered here. The postulates are: (1) The movement continuum, describing the character of the universe and placing social evolution at the end of a series of progressive changes in the direction of greater variability in electron-proton statics and dynamics; (2) the organism, a locus in the movement continuum, made up of physical structures, changes in which are correlational functions of changes in the environment; (3) human behavior, the form of motion fundamental to social psychology, which is made up of those movements and their physical effects which have become socialized stimuli for the same or for other individuals; (4) speech, a form of behavior through which individuals are functionally interconnected into a social organization, and forming a substitute form of behavior for the objects and events of the universe; (5) sensorimotor interchangeability, a form of behavior in which sense organs and muscles of one individual are used by another, being the principle upon which cooperation between individuals rests; (6) social or-

ganization, the cooperation between individuals through which social institutions have developed, and operating as devices for increasing variability in behavior; (7) social evolution, which is in the direction of a maximum variability in the behavior of each individual with the least possible expenditure of energy; (8) civilization, the sum of the acquired forms of behavior and the institutions and practices which are products of this behavior; (9) methodology, the investigation of the biological (ontogenetic) and social (phylogenetic) antecedents of human behavior; and (10) applied social psychology, stressing the importance of teaching that all social problems have a scientific solution, but questioning whether the scientific principles underlying social organization can be taught to any considerable percentage of the population at large.—*E. N. Brush* (Boston Psychopathic Hospital).

[See also abstracts 2332, 2352, 2353, 2438, 2450, 2490.]

CHILDHOOD AND ADOLESCENCE

2479. **Anderson, S.** *Tar; a midwest childhood.* New York: Boni & Liveright, 1926. Pp. 346.—In an artistic way the author presents the childhood of Tar Moorhead from birth to his mother's death when he is fourteen. There is enough of an autobiographical foundation to make the material of scientific interest as an account of the mental development of a sensitive child in a drab and mediocre environment. Of particular value are the accounts of a child's mental reaction to the routine and the crises in his home and to the life of his parents, and the episodes in the growth of his psychic sex life.—*A. L. Allport* (Dartmouth).

2480. **Blanchard, P.** *A study of subject matter and motivation of children's dreams.* *J. Abn. & Soc. Psychol.*, 1926, 21, 24-37.—Three hundred children examined and treated in a child guidance clinic are the subjects of this study. With reference to habits, personality and conduct, they can hardly be considered typical of an unselected group. Parents were the most frequent subjects of dreams, and animals next. Others were play activities, falling, robbers, death, relations other than parents, opposite sex, supernatural beings, riches and fire. A tabulation of subjects according to life age, mental age and I. Q. of the dreamer revealed very little. Interpretation of the dreams was based on the manifest content, and motives assigned were those which seemed obvious from the child's associations and from information available in social and psychiatric studies. The largest number of dreams were expressions of wishes or fears, a fact quite in harmony with Freud's theories. Sex, however, did not appear openly in the motivation of the dreams to any marked degree. Wishes concerning the parent were better represented. Wish fulfillment along lines of compensation for feelings of inferiority appeared in only 1.3% of the cases. Dreams resulting from mental conflict were more frequent, and many had their origin in movies and stories. Methods and technique available in the study of motivation of dreams are not, as yet, wholly satisfactory, and for this reason these data are presented with reservations. In the clinic dreams are useful in understanding the child's difficulties, predicting his behavior, and bringing to bear upon him influences which may change his conduct.—*E. N. Brush* (Boston Psychopathic Hospital).

2481. **Gibson, J. E.** *On being a girl.* New York: Macmillan, 1927. Pp. xiv + 326. \$1.60.—This book is the outgrowth of the author's experience of some five years as the leader of discussion groups among high school girls and is designed to form the background of a course for such groups. The material presented is arranged especially for girls from 14 to 16 years of age, but is so pre-

sented that it might be adapted to the use of older girls. "The purpose of the course is to 'open doors' to right thought and action on vital questions." The success of such a course depends upon the method employed, and this in turn is dependent upon the leader, who should know and have a sympathetic understanding of the interests, opinions, and attitudes of high school boys and girls, and possess an excellent personality, since "ideals of all sorts are caught from personal association far more than they are learned from lessons." The material is organized in three divisions: (1) the girl's relation to her community, (2) her relation to her family and her friends, and (3) her own personality and its self expression. At the end of each division is an annotated bibliography for the leader and another for the girls, the latter chosen by the girls themselves as being the most interesting and valuable to them. An appendix contains a discussion of the relation of activities to discussion groups and gives several plans for girls' groups, girls' codes, etc., which are in use.—*L. M. Harden* (Clark).

2482. *Ilyinsky, P. J.* [On the correlation of the facilitative and inhibitive processes in the formation of associative motor reflexes in adolescent children.] *Voprosy izucheniya i vospitaniya lichnosti* (Problems in the study and education of personality), 1927, No. 1, 21-25.—The associative reflex is set up relatively slowly in boys and is but slightly generalized; differentiation is accomplished rather quickly, leading, however, to a complete loss of the reflex. In girls, on the other hand, the reflex is set up more quickly and is more generalized, differentiation comes slowly, and the reflex often persists. From this it is evident that the facilitative process is more developed in adolescent girls than is the inhibitive process, while, on the other hand, boys show in comparison to the girls a significantly greater development of the inhibitive process. The correlation of the facilitative and inhibitive process in children of both sexes in early adolescence is very similar to that which has been observed in adolescent girls. Concerning the correlation of these processes in older children, the author reports that no conclusions can as yet be drawn since sufficient experimental data have not been obtained.—*A. L. Shnirman* (Leningrad).

2483. *Ishimaru, D.* Studies on nutrition, scholarship, and personality of school children. *Gakko Eisei* (School Hygiene), 1925, 5, No. 2, 3, 4, 5.—5,102 boys and 5,026 girls of 7 to 14 years in Saseho, Japan, were studied statistically in regard to the following items: nutrition, personality (mental traits), scholarship, sleep and its relation to nutrition and scholarship, time of going to bed and its relation to personality and scholarship, relation between nutrition and social status, relation between nutrition and number of rooms at home, nutrition and its relation to personality and scholarship, physical conditions. The main findings were: (1) The sleeping hours tend in general to be insufficient. This insufficiency of sleep has bad effects on nutrition, personality, and scholarship. (2) The age norms for the time of going to bed have been established. The children who go to bed late as compared with the age norms suffer from mal-nutrition, undesirable personality, and low scholarship. (3) A proper or improper nursing in early infancy has great influence on later nutrition, personality, and scholarship. (4) Good nutrition is positively correlated with good personality and scholarship. (5) The children from well-to-do families were found to be victims of mal-nutrition more than the children from lower classes. The degree of mal-nutrition was greatest in the girls of rich families. (6) Large space at home as estimated by the number of rooms correlates positively with mal-nutrition. Items (5) and (6) indicate the operation of some abnormal factors which need to be further investigated. Errors introduced in measurement of personality on the basis of estimates of arbitrarily classified mental traits without a strict standardization were fully admitted. The general conclusions, however, according to the author's view, are accurate enough to show general tendencies in the interaction of nutrition, scholarship, and personality of school children.—*J. G. Yoshioka* (California).

2484. Nagy, L. *A sexualitás hatása az ifjak társas életének kialakulására.* (The influence of sexuality upon the development of social life in youth.) *A Gyermek* (The child), 1926, 19, 65-76.—An investigation, using as data the regulations and descriptions of activities, of thirty-five secret societies of boys from nine to eighteen years old and girls from twelve to eighteen, including twenty-six in large cities and nine in small ones. (1) Associations of nine- to twelve-year-old children are conducted in accordance with their objective conception of the organizations in their environment. (2) With thirteen- to fifteen-year-olds, the sexual experiences and feelings which now begin to press in upon them with greater power become the guiding motive for social contacts. These, however, are regarded in relation to the influential social feelings, which are at this time still subconscious. (3) With the fifteen- and sixteen-year-olds, there follows, through the penetration of the influences of the community life, the idealization of the love life. (4) With seventeen- to twenty-year-olds, idealistic thinking becomes the activating motive of communal association. With this stage a definite striving toward the repression of sexuality becomes evident.—P. Ranschburg (Budapest).

2485. Reymer, M. L. Ontogenetic aspects of "meaning". *Proc. 8th Internat. Cong., Groningen.* Groningen: Noordhoff, 1927. Pp. 393-396.—300 child observers (ages 5 to 14) were examined in individual sittings. First a 60° angle drawn in black on a white card was exposed, with the question "What is this? What does this mean to you?" Some responses, in order of frequency, were: figures, letters, and "teacher's mark"; arrow, bird's beak, roof of house, point, tent, crescendo, box, street corner, anchor, plough, "game of rabbit", wolf's mouth, cow's foot, kite, etc. The question was then asked, "How do you know? Why does it mean that to you?" Three series (5 lines of varying thickness, 5 angles differing in position, 5 angles differing in inclination) were then presented with the aim of getting light on the bearing of attributes like size, position, etc., of simple geometrical designs on meaning. Only one figure was given to each child on the same day; thus each series called for five consecutive days of examination and report. The following preliminary suggestive inferences were made: (1) Meaning seems to be derived entirely from and to be built up by experience. (2) The dominating factors of experience conveying meaning were almost invariably kinesthetic; the more difficult the stimulus and the younger the child, the greater the kinesthesia. (3) Meaning springs from a context, a gross pattern or gross phenomenological situation—almost invariably colored by pleasant emotional content. (4) The same stimulus may give rise to almost any meaning, and this meaning is often independent of attributes of the stimulus like position, size, etc. Meaning thus does not seem to reside in the stimulus, but rather in a relation between stimulus and response, of a phenomenological nature. (5) Such relationships are very unstable in young children; with advancing age and homogeneous training they tend to become more stabilized and uniform. (6) Meaning evoked by these figures seems to evolve in two stages: (a) from object or situation pattern or context, (b) from symbol pattern or context. (a) is very unstable—imaginary and emotional; (b) is generally of a definite context or pattern based on direct learning. (7) The structuration of meaning, then, seems from this material to terminate and crystallize itself out at various stages of development in a definite symbol pattern of great stability and of a certain duration, to be changed in times only by the superposition of another symbol. (8) A meaning pattern or structure may at times seemingly have no conscious concomitants. (9) While the naming of meaning is the natural reaction, children may carry meaning in purely kinesthetic and other forms of expression within the general pattern.—R. R. Willoughby (Clark).

2486. Shevaleva, E., & Ergolska, O. [Children's collectives in the light

of experimental reflexology.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoj deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 147-182.—The question of the reciprocal influence of children in their social behavior is one of the outstanding questions of contemporary pedagogy. It should be studied by the experimental methods indicated by V. M. Bekhterev in his "social reflexology." The authors have carried out regular experiments upon 708 children of school age, divided into groups of from two to four individuals. Each group was given as test material a social recitation on a subject of its own choosing. The students in each group were changed systematically. The results obtained were: (1) From the point of view of the intensity of excitability, the children may be divided into two groups: those who are easily excited and those who resist the exciting stimulus. (2) As to the regular appearance of the phenomenon, there are collectives showing consistent excitability and collectives showing unstable excitability. (3) With respect to inductive mobility, there are collectives with relatively great inductive mobility and collectives with relatively slight inductive mobility; the latter may again be divided into (a) collectives with relatively slight inductive mobility, positive as well as negative, with as difficult a shifting from the process of excitation to the process of inhibition as in the reverse direction; (b) collectives of relatively slight positive inductive mobility with a predominance of the inhibitive process; (c) collectives with relatively slight negative inductive mobility with a predominance of the excitatory process.—*A. L. Shnirman* (Leningrad).

2487. **Squires, P. C.** "Wolf children" of India. *Amer. J. Psychol.*, 1927, 38, 313-315.—A brief description is given of two children who were found living in a den with a family of wolves.—*G. J. Rich* (Institute for Juvenile Research).

2488. **Vidoni, G.** [The census of abnormal pupils and the work of the Biotypological Institute of Geneva.] *Educ. naz.*, 1927, fasc. 1.—After considering the utility of a census of the abnormal children attending the elementary schools, the author treats the data gathered by the Minister of Instruction in the primary schools of the various regions of Italy, paying particular attention to those gathered by the Institute of Geneva with regard to the children of the first two elementary classes of the various schools of the province. After examining the data obtained, he concludes in general that the children who need particular medicopedagogical treatment because of the condition of the nervous system constitute 20% of the pupils. From this it may be calculated that in the province of Genoa there are not less than 1000 educable abnormal pupils.—*G. Vidoni* (Genoa).

2489. **Wickes, F. G.** *The inner world of childhood: a study in analytical psychology*. New York: Appleton, 1927. Pp. xiv + 379. \$3.00.—A book which, as stated in the introduction by Jung, is practical rather than strictly scientific, and "deserves the most serious attention of all who are concerned with children through vocation or through duty". Chapter I gives a short history of psychoanalysis with a comparison between the Freud and Jung outlooks; and, incidentally, the author's analytic philosophy, which is based upon the Jung tradition—with its concepts of the "collective unconscious" and the division of people into extrovert and introvert types—and adapted for application to children's problems. The child's analysis should not be undertaken directly, but, wherever possible, through one or both of the parents; for a child's problem is usually caused by an unsolved and unconscious adult problem. There is an urgent need of personal analysis for those who would help children, for "only the free individual who has found his own way of life can help others to freedom" and to growth toward psychological adulthood. There is a discussion of childish fears, deceits, hates, overpowering emotions, imaginative creations and the part these play in the child's life for compensatory, integratory, or regressive purposes. There are a number of case histories used for illustration.—*M. Goodrie* (Clark).

[See also abstracts 2353, 2436, 2490, 2491, 2497, 2500.]

EDUCATIONAL PSYCHOLOGY

2490. **Anderson, R. G.** The problem of the dull-normal child. *Ment. Hygiene*, 1927, 11, 272-286.—The child who is too "bright" to be placed in a special class for mentally retarded children but a little too "dull" to maintain the pace set by the average child in school shows a strong tendency to develop behavior difficulties and to become delinquent. He should have an education adapted to his needs, but this is not provided by most schools. It has not been sufficiently recognized that success and failure are health conditions of fundamental importance. Continued failure is liable to develop an unsocial attitude, but in the ordinary school the dull child has no opportunity to succeed. The alternative is often some form of socially unacceptable behavior.—*G. J. Rich* (Institute for Juvenile Research).

2491. **Bird, G. E.** The value of mental hygiene in the secondary school. *Ment. Hygiene*, 1927, 11, 253-260.—The readjustments necessary in the period of adolescence offer a number of problems in the field of mental hygiene. In the secondary school, the changes in the methods of instruction, the relationship between pupil and teacher, the growth of adult interests, especially vocational, and the mental distraction of the sex impulse may tend toward uncontrollable emotion which requires correction.—*G. J. Rich* (Institute for Juvenile Research).

2492. **Bovet, P.** En qué consiste la grandeza de Pestalozzi? (What is the greatness of Pestalozzi?) *La Obra*, 1927, 7, 148-151.—Pestalozzi's greatness lay in his intense desire to understand the psychology of teaching and his practice thereof. Ramsauer, speaking of Pestalozzi's class at Bergdorf, says: "All the instruction was limited to drawing and sketching, simple calculation, and language exercises. The pupils had neither books nor notebooks, but drew sketches of nature, of still life on their slates. All activities were true exercises of perception." Pestalozzi realized the close relationship between the home and the child, as shown in the following: "My object was to simplify the means of education so that the humblest man could himself instruct his children . . . it creates—to my mind—a very grave situation to the child to separate him too early from his mother's bosom, sending him to the unnatural and strange workings of the school." Believing the school and the home should be one, it was said of Pestalozzi's house, "Dies ist keine Schule, es ist eine Haushaltung"—"This is not a school, it is a family." The philosophy of Pestalozzi which made him so beloved of his fellow men is best expressed in his saying: "Love God, your Master, as the little child loves its mother. Love your fellow men as a mother loves her child."—*R. Williams* (San José).

2493. **Counts, G. S.** The social composition of boards of education; a study in the social control of public education. *Sup. Educ. Monog.*, 1927, No. 33. Pp. 100.—By means of a questionnaire sent to superintendents, information concerning the organization of their school board and certain characteristics of its members was secured. The number of boards included was 1654, divided as follows: district boards 974, city boards 532, county boards 65, state boards 39, college boards 44. The selection constituted a fairly representative sampling from the entire country. The following data were secured for the board as a whole: number of members, method of selection, compensation, approximate number of hours per year devoted to board duties, term of office, number having children in public schools. The following information was secured for the individual board members: sex, age, occupation, education, number of years served. It was found that the boards ranged in size from 3 to 100 members, the average number ranging from 5.5 for county boards to 9.8 for college boards. Terms of office ranged from one year to life; actual tenure from members then serving their first year to 60 years, with the average about four years. No relationship between tenure

and method of selection was apparent. Time devoted to board duties averaged about 50 hours annually for each member. 86% of the members of the city boards received no compensation. In the case of state and county boards a nominal compensation designed to cover travelling and similar expenses was usual. Members ranged in age from 22 to 85 years, with a median of 48 years for city and county boards and of 54 years for state and college boards. "Selection by popular vote appears to favor the younger aspirants while selection by appointment appears to give the advantage to the older candidates." About 10% of all board members are women, the proportion being smallest for the rural districts and greatest in the cities. 42% of the members of the county boards and 6% of the members of the college boards had not gone beyond the eighth grade, but 34% of the former and 80% of the latter had had some college training. As regards occupation, proprietors and professional men account for 50% of the total membership of all boards. Manual laborers, which includes skilled, semi-skilled and unskilled workers, make up only 3% of the total. Little or no relationship was shown between occupational class and method of selection. The proportion of proprietors is greater and that of manual workers lower where the members receive compensation than among the boards receiving no compensation. The average size of non-compensated boards is almost 50% greater than that of compensated boards. The conclusion is drawn that granting compensation to members by decreasing the size of the board increases the influence of the individual members, thus rendering the competition for membership more keen so that only representatives of the more favored and dominant groups in the community are likely to be chosen.—*F. L. Goodenough* (Minnesota).

2494. **de Rezzano, C. G.** *La escuela nueva en acción. Contribución Argentina a la realización de la escuela nueva.* (The new school in practice. Argentinian effort toward the realization of the new school.) *La Obra*, 1927, 7, Section *Nueva Era*, 25-31.—Notes on classes in the first and second grades are presented, showing the problems and methods of attack from the standpoint of the new education, together with numerous points on the psychology of the intimate relationship of the home and school, and mother and teacher, as applied to this group. The principal parts of the daily program are given, with special effort toward showing the natural transition of each subject to the one immediately following. For example, the first period may be given over to singing, the next to lectures, language class, manual training, etc. However, the lecture or class which follows is determined principally by the preceding one and is essentially interconnected with it. A typical guide for the two grades mentioned is given on the five succeeding pages of this issue, and further examples are promised by Señora de Rezzano in future numbers.—*R. Williams* (San José).

2495. **Meredith, F.** *The administration of mental hygiene in colleges. Ment. Hygiene*, 1927, 11, 241-252.—The administration of mental hygiene in colleges involves: (1) personnel consisting of a psychiatrist, an adequately equipped medical staff, special coöperating officials, an enlightened and sympathetic official staff, and a student body trained to seek help in mental difficulties; (2) educational methods for the benefit of the medical staff, college official personnel and student body; (3) definite preventive measures such as favorable environment, favorable personal contacts, lectures and consultations; (4) methods of discovering where special difficulties exist by means of questions by physicians and reports from officials and students; and (5) methods of treating mental hygiene cases by a psychiatrist, by members of the medical staff, or by others under their direction.—*G. J. Rich* (Institute for Juvenile Research).

2496. **Miller, H. W.** *Segregation on the basis of ability. School & Soc.*, 1927, 26, 84-88; 114-120.—Using the method of extreme groups, some of the faculty of the College of Engineering at the University of Michigan have studied

their good and poor students from the point of view of academic performance, ancestry, parental education, extra-curricular work load, looks, intelligence, preparation, and benefits derived from a course in descriptive geometry as a result of segregation according to ability. It is concluded that superior students in at least technical subjects, and probably in all subjects, can derive an additional profit of 33% when segregated; that previous college accomplishment is a satisfactory basis for segregation; that preparatory school performance can be used to detect a large number of the inferior students; that segregation does the latter no harm and leaves the instructor free to give the more capable their quota of attention. The superior students in the groups examined were not only more frequently grandsons of foreign-born grandparents than were the inferior, but also came from relatively less well-educated parents, looked more alert and tenacious, carried heavier academic schedules, dropped fewer courses, stayed in school longer, and engaged in about the same amount of activity for self support.—*H. L. Koch* (Texas).

2497. **Pringle, R. W.** *Methods with adolescents.* Boston: Heath, 1927. Pp. 437. \$2.00.—The book is intended to aid high school teachers, particularly those in small towns who have many different subjects to teach, in the solution of everyday problems of classroom instruction. The first three chapters are of a general nature, dealing with principles of educational method, the adolescent intellect, and general classroom procedure. The modifications of behavior, the changes in interests and in emotional drive characteristic of the adolescent period are discussed, and an attempt made to relate these changes to physiological conditions. The remainder of the book is given up to a more specific consideration of the various high school subjects. The chapter heads are as follows: mathematics, algebra, geometry, science, biological sciences, physical sciences, history, civics, economics and sociology, English composition, literature, foreign languages, Latin, modern languages. The place of each in the curriculum is discussed, and various types of teaching methods are described and compared. The book includes a foreword by L. D. Coffman, and a bibliography of 108 titles.—*F. L. Goodenough* (Minnesota).

2498. **Rezzano, J.** *Las escuelas normales y la nueva educación. La formación de los maestros.* (The normal schools and the new education. The development of the teachers.) *La Obra*, 1927, 7, Section *Nueva Era*, 18-20.—Previous numbers of *Nueva Era* have treated of and pointed out the evolution of the concept of the aim and the nature of education in the last twenty-five years. It is from this point of view that the training and development of teachers is presented. Transmission of knowledge is not yet the ultimate aim of the new education, the content having lost its predominance as new concepts in education have unfolded. Problems relating to the practice of these principles are being studied in La Escuela Normal No. 5 in Buenos Aires under suitable auspices, with the purpose of adaptation to primary schools. In the past twenty years a new training and development of teachers has steadily manifested itself. The program of the teacher, in the light of the new education as it is termed, consists in advancing and working with the pupils as a guiding companion, in being able to observe surely and precisely each individual in order to guide him in each step of his growth. The nucleus of education is found not in method of instruction but rather in the personality of the teacher. Certain attributes and techniques, however, are essential so that the pedagogical personality may accomplish the desired end. This development of the *maestro* can be accomplished by two types of institutions—namely: by new institutions in the sense of new education, or by transformation of existing institutions, or by combination of both. The first should be understood as an *experimental* school in complete sense of the term; the second should be considered as the *demonstrating or proving* school. Examples

of these are found in the schools of Pestalozzi, Neuhoof, Stanz, and Burgdorf representing the former, and the school at Iverdon the latter. The Universities of Königsberg and Jena are also respectively representative of the two types, while in the United States is an experimental annex at the University of Chicago, founded by Dewey, whose principles and developments have served the schools of that country. As a solution of the problem in Argentina it is suggested that a few existing normal schools be converted to experimental schools of the type above, and further, that the interchanging of professors between normal schools and public schools be encouraged. More data pertinent to this subject is to be published in future numbers.—*R. Williams* (San José).

2499. **Thompson, C. M.** The value of mental hygiene in the college. *Ment. Hygiene*, 1927, 11, 225-240.—The colleges need mental hygiene as a regular part of college study and health service. It should take the forms of personal consultation and advice from the psychiatrist as physician in dealing with the small number of serious mental disorders that may be expected to appear in a selected group of healthy young people, consultation and advice in many minor cases in which the understanding that can be given to the patient may prevent later difficulties, and a regular course of study for freshmen, so that the principles of good mental health may be the common possession of all students from the beginning of the college course.—*G. J. Rich* (Institute for Juvenile Research).

2500. **Truitt, R. P.** Mental hygiene and the public school. *Ment. Hygiene*, 1927, 11, 261-271.—The present organization of public schools offers no opportunity to meet the emotional needs of the children, or to treat them as individual personalities who are to be prepared to handle life's situations. Mental maladjustments begin in the child's earliest years and are often exaggerated by his treatment at school. The fundamental aim of education should be the adjustment of the child to himself. To accomplish this end, the attitude of the school must be profoundly influenced by the mental hygiene point of view.—*G. J. Rich* (Institute for Juvenile Research).

2501. **Wilson, M. O.** Interests of college students. *Amer. J. Psychol.*, 1927, 38, 409-417.—The achievements (in terms of marks) and preferences (as indicated by course elected) of college students majoring in various departments were compared. When freedom of selection is given, students tend to specialize, but any given student may gratify the same general intellectual desire equally well in several different departments of instruction. The correlation between the number of courses taken and the scholarship in a given department indicates that the student usually does his best work in those courses which he chooses more or less freely.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 2398, 2455, 2488.]

BIOMETRY AND STATISTICS

2502. **Culler, E.** The accuracy of the method of constant stimuli: a reply to Dr. Urban. *Amer. J. Psychol.*, 1927, 38, 307-312.—The probable error of the limen determined by the method of constant stimuli, when calculated by Urban's formula, is many times larger than the actual dispersion of the limens obtained by experimentation. Moreover, the value of the probable error is indeterminate, depending upon the position of the origin. There is a logical error in Urban's deduction, in that h and c are not independent variables but are very definitely related to each other.—*G. J. Rich* (Institute for Juvenile Research).

2503. **Newhall, S. M.** Linear interpolation vs. the constant method. *Amer. J. Psychol.*, 1927, 38, 390-402.—The limens from 100 psychometric func-

tions for lifted weights were computed (1) by the constant process, (2) by linear interpolation from two stimulus values, (3) by linear interpolation from four stimulus values, (4) by curvilinear interpolation, assuming normality, from two stimulus values, and (5) by curvilinear interpolation from four stimulus values. The thresholds computed from the data for two pairs of stimuli may depart widely from the constant process. Those obtained from four sets of stimuli approximate quite closely the constant process, especially if normality is assumed and the interpolation is curvilinear. The labor of computing limens by the constant process is not justified.—*G. J. Rich* (Institute for Juvenile Research).

2504. **Thurstone, L. L.** *Psychophysical analysis.* *Amer. J. Psychol.*, 1927, 38, 368-389.—The author discards the traditional method of deriving psychophysical equations in terms of two stimulus magnitudes and a discriminatory power. Instead, he starts with the concept of the discrimininal process, the process by which an organism distinguishes and reacts to a given stimulus. A series of stimuli will be paralleled by a series of discrimininal processes. There is, however, a variability or fluctuation of the connection between the stimulus and its discrimininal process. This fluctuation among the discrimininal processes for a uniform repeated stimulus is termed the discrimininal dispersion. Experiments have shown that the discrimininal dispersion usually takes the form of a normal distribution. Its mode is called the modal discrimininal process. The standard deviation of a dispersion forms a unit for psychological measurements. Finally, the concept of discrimininal difference is used to indicate the linear separation between two processes. It corresponds to the sense distance. The fundamental psychophysical equation is worked out in the above terms. It equates the discrimininal difference between two modal scale values to the product of the standard deviation of this discrimininal difference (which is a function of the standard deviations of the two discrimininal dispersions involved) by the sigma value of the experimentally determined proportion of "right" or "wrong" judgments. The experimental procedure for verifying the assumed normality of discrimininal dispersion is outlined. Fechner's law is applicable only when the stimuli can be physically measured, and even then depends on the type of measurement used. Weber's law is dependent upon Fechner's law if the discrimininal dispersion is constant throughout the continuum; otherwise it holds when Fechner's law does not.—*G. J. Rich* (Institute for Juvenile Research).

2505. **Urban, F. M.** *The accuracy of the method of constant stimuli.* *Amer. J. Psychol.*, 1927, 38, 252-256.—The calculation of the probable error of the interval of uncertainty according to procedures based upon the theory of least squares shows that the method of constant stimuli is the least accurate of the psychophysical methods. The reason for this lack of accuracy is not apparent.—*G. J. Rich* (Institute for Juvenile Research).

MENTAL TESTS

[See abstract 2354.]

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